

From: Struhar, Kirby [struhar.kirby@epa.gov]
Sent: 12/11/2020 9:58:25 PM
To: Struhar, Kirby [struhar.kirby@epa.gov]
Subject: OCIR Weekly Report 12.11.2020
Attachments: OCIR Weekly Report 12.11.2020.docx

Office of Congressional & Intergovernmental Relations

WEEKLY RECAP

Meetings

- Dec. 7th Administrator Wheeler participated in a virtual air announcement with the Governor, Senior Deputy Attorney General, and Secretary of Environmental Protection of West Virginia. Congressman Alex Mooney (WV-02) also participated.
- Dec. 8th Administrator Wheeler held a virtual meeting with Senator Shelley Moore Capito (WV).
- Dec. 9th The Local Government Advisory Committee held its full committee meeting.
- Dec. 9th Administrator Wheeler met with Congresswoman Cathy McMorris Rodgers (WA-05).
- Dec. 11th Administrator Wheeler had a speaking engagement with the Rule of Law Defense Fund.

Hearings

- Dec. 10th The Senate Committee on Commerce, Science, and Transportation, Subcommittee on Transportation and Safety held a hearing, "The Logistics of Transporting a COVID-19 Vaccine." More information is available, [here](#).

LOOK AHEAD

Meetings

- Dec. 14th Administrator Wheeler will hold a call with Congressman John Shimkus (IL-15).
- Dec. 16th OCIR and OW are meeting virtually with Representatives Kelcourse and Mirra from MA to discuss federal funding available to help with sewer infrastructure upgrades to treatment facilities along the Merrimack River in Massachusetts.
- Dec. 17th Administrator Wheeler will meet with Congressman Bruce Westerman (AR-04).

STORIES OF INTEREST

CONGRESS:

- Dec. 5th In his final days, Sen. Lamar Alexander waxes nostalgic [LINK](#)
- Dec. 5th Two Retiring Senators, Two Divergent Views on How to Save the Senate [LINK](#)
- Dec. 8th McCarthy says he and McConnell back \$600 stimulus checks [LINK](#)
- Dec. 9th Biden picks leave Democrats with slimmest House majority in modern history [LINK](#)
- Dec. 9th Bipartisan senators introduce tree conservation bill as climate solution [LINK](#)

INTERGOV:

- Dec. 3rd Commentary: EPA regulatory-process changes would benefit SC businesses [Link](#)
- Dec. 7th Officials: Flint makes progress toward ending water crisis. [Link](#)
- Dec. 7th EPA proposes Texas be allowed to operate its own coal ash management program [Link](#)
- Dec. 9th Michigan will borrow \$600M for Flint water settlement [Link](#)
- Dec. 10th How governors are fighting for clean energy jobs [Link](#)

Kirby Struhar

Congressional Relations

U.S. Environmental Protection Agency

C: Ex. 6

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- Dec. 9th Bipartisan senators introduce tree conservation bill as climate solution [[HYPERLINK "https://thehill.com/policy/energy-environment/529496-bipartisan-senators-introduce-tree-conservation-bill-as-climate"](https://thehill.com/policy/energy-environment/529496-bipartisan-senators-introduce-tree-conservation-bill-as-climate)]

INTERGOV:

- Dec. 3rd Commentary: EPA regulatory-process changes would benefit SC businesses [[HYPERLINK "https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.postandcourier.com%2Fopinion%2Fcommentary%2Fcommentary-epa-regulatory-process-changes-would-benefit-sc-businesses%2Farticle_b9417370-33d8-11eb-b497-27f1f6ab90e9.html&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210912105%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C1000&sdata=LIStO2vbc9WrmMNaZ%2B5PV597i5hbxjJCzpXBXdHI5k%3D&reserved=0"](https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.postandcourier.com%2Fopinion%2Fcommentary%2Fcommentary-epa-regulatory-process-changes-would-benefit-sc-businesses%2Farticle_b9417370-33d8-11eb-b497-27f1f6ab90e9.html&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210912105%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IjEhaWwiLCJXVCi6Mn0%3D%7C1000&sdata=LIStO2vbc9WrmMNaZ%2B5PV597i5hbxjJCzpXBXdHI5k%3D&reserved=0)]

- Dec. 7th Officials: Flint makes progress toward ending water crisis. [[HYPERLINK](https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fapnews.com%2Farticle%2Fus-news-environment-michigan-flint-bd1c830d9044d46d3385202b69530070&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210912105%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=c4d6SaM37DCHKYVhuj7Y2MlojrNzRji5a30TiTzz%2BE0%3D&reserved=0)
"https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fapnews.com%2Farticle%2Fus-news-environment-michigan-flint-bd1c830d9044d46d3385202b69530070&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210912105%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=c4d6SaM37DCHKYVhuj7Y2MlojrNzRji5a30TiTzz%2BE0%3D&reserved=0"]
- Dec. 7th EPA proposes Texas be allowed to operate its own coal ash management program [[HYPERLINK](https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.utilitydive.com%2Fnews%2Fepa-proposes-texas-be-allowed-to-operate-its-own-coal-ash-management-progra%2F591688%2F&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210922075%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=zCYaxvTAzyMHv%2FjVcphD%2BukNAGIlehb9cLKv9AdCtRM%3D&reserved=0)
"https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.utilitydive.com%2Fnews%2Fepa-proposes-texas-be-allowed-to-operate-its-own-coal-ash-management-progra%2F591688%2F&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210922075%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=zCYaxvTAzyMHv%2FjVcphD%2BukNAGIlehb9cLKv9AdCtRM%3D&reserved=0"]
- Dec. 9th Michigan will borrow \$600M for Flint water settlement [[HYPERLINK](https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fapnews.com%2Farticle%2Fenvironment-michigan-flint-legal-settlements-state-governments-ff34680da92c28537ed8370ada1358c3&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210932034%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=U2%2BIRC1ARgu6FHb2lXZfNv5SUqn0lxv9ntfZ8YPHvpE%3D&reserved=0)
"https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fapnews.com%2Farticle%2Fenvironment-michigan-flint-legal-settlements-state-governments-ff34680da92c28537ed8370ada1358c3&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210932034%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=U2%2BIRC1ARgu6FHb2lXZfNv5SUqn0lxv9ntfZ8YPHvpE%3D&reserved=0"]
- Dec. 10th How governors are fighting for clean energy jobs [[HYPERLINK](https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.theverge.com%2F2020%2F12%2F10%2F22167938%2Fgovernors-us-climate-change-alliance-clean-energy-jobs&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210932034%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=kpoEtsH%2FQ3p4qJ3QTyx8aC1QW39jsr9PcYTWj0tmv64%3D&reserved=0)
"https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.theverge.com%2F2020%2F12%2F10%2F22167938%2Fgovernors-us-climate-change-alliance-clean-energy-jobs&data=04%7C01%7Cstruhar.kirby%40epa.gov%7C400e67b6195244f611ae08d89df0a74f%7C88b378b367484867acf976aacbeca6a7%7C0%7C0%7C637433004210932034%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IklhaWwiLCJXVCI6Mn0%3D%7C1000&sdata=kpoEtsH%2FQ3p4qJ3QTyx8aC1QW39jsr9PcYTWj0tmv64%3D&reserved=0"]

Message

From: Will Hupman [HupmanW@api.org]
Sent: 1/13/2021 7:11:54 PM
To: Wheeler, Andrew [wheeler.andrew@epa.gov]
CC: Ron Chittim [Chittim@api.org]; Frank Macchiarola [MacchiarolaF@api.org]; Gunasekara, Mandy [gunasekara.Mandy@epa.gov]; Idsal, Anne [idsal.anne@epa.gov]
Subject: API on Small Refinery Exemptions
Attachments: API SRE Letter to EPA (1-13-21)(Final-2).pdf

Dear Administrator Wheeler – Please find attached a letter from API regarding small refinery exemptions. Thank you for your consideration of this matter.

Will Hupman

Will Hupman
Director – Federal Affairs
o: 202.682.8396
m: 202.615.7192
e: hupmanw@api.org





American
Petroleum
Institute

Ron Chittim
Vice President
API Downstream Policy
202-682-8167
chittim@api.org

January 13, 2021

Via Electronic and U.S. Mail

The Honorable Andrew Wheeler, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: 2019 Small Refinery Exemptions

Dear Administrator Wheeler:

There are reports that EPA plans to grant many small refinery exemptions (SREs) submitted by refiners outside of the United States Court of Appeals for the Tenth Circuit's jurisdiction for the Renewable Fuels Program (RFS) 2019 compliance year. The American Petroleum Institute (API) believes that EPA granting these SREs will create an unlevel playing field, which will only serve to exacerbate the competitive distortions among refineries competing in the same marketplace. Furthermore, wholesale exemptions that attempt to make the RFS program workable for some refiners also serve to punish non-exempt refiners who already face challenging RFS compliance obligations. The ongoing issues with the RFS have been structural from the inception of the program, apply to all regulated parties, and need to be addressed on a nationwide basis.

API supports the January 2020 Tenth Circuit holding in Renewable Fuels Association et al. v EPA as it is consistent with Congress's intent when it enacted the RFS. Further, given that the U.S. Supreme Court recently granted certiorari in that case, we believe EPA, as well as obligated parties, would best be served by allowing the Court to determine the proper path forward on SREs. For these reasons, we implore the Agency to reconsider any immediate plans to grant wholesale 2019 SREs. Thank you for your consideration of this matter.

Respectfully,

Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 12/1/2020 4:45:28 PM
To: Grantham, Nancy [Grantham.Nancy@epa.gov]; Hewitt, James [hewitt.james@epa.gov]; Block, Molly [block.molly@epa.gov]; McFaul, Jessica [mcfaul.jessica@epa.gov]; Drinkard, Andrea [Drinkard.Andrea@epa.gov]; Dieu, Martin [Dieu.Martin@epa.gov]
CC: Idsal, Anne [idsal.anne@epa.gov]; Cory, Preston [Cory.Preston@epa.gov]; Landeene, Sarah [Landeene.Sarah@epa.gov]; Tardif, Abigale (Abbie) [Tardif.Abigale@epa.gov]; Raymond, Kelley [Raymond.Kelley@epa.gov]
Subject: PM Comms materials
Attachments: DRAFT PM NAAQS Comms Plan 12.1.20.docx; PM NAAQS DRAFT QsAs11.30.docx

Hi all,

Attached are the materials for the upcoming PM action, which is expected to be signed on Friday. Please let us know if you have any questions!

Thanks,
Isabel

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 12/1/2020 4:05:12 PM
To: Moor, Karl [Moor.Karl@epa.gov]
CC: Idsal, Anne [idsal.anne@epa.gov]; Raymond, Kelley [Raymond.Kelley@epa.gov]; Shaw, Betsy [Shaw.Betsy@epa.gov]; Kabanda, Thierry [Kabanda.Thierry@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: RE: Transition Team Meeting Today
Attachments: EtO 2020 Transition Paper_10.15.20_final.docx; Heavy Duty Trucking & Aircraft Sectors 2020 Transition Paper_10.15.20_final.docx; IAQ and COVID 2020 Transition Paper_10.15.20_final.docx; NAAQS Implementation 2020 Transition Paper_10.15.20_final.docx; NAAQS Standard Setting 2020 Transition Paper_10.15.20_final.docx; OAR Presidential Transition Overview Paper 10-29-2020.docx; Ozone Transport 2020 Transition Paper_10.15.20_final.docx; Phosphogypsum 2020 Transition Paper_10.15.20_final.docx; RFS 2020 Transition Paper_10.15.20_final.docx; The Montreal Protocol and HFCs 2020 Transition Paper_10.15.20_final.docx; U.S. GHG Emissions Trends 2020 Transition Paper_10.15.20_final.docx; WIPP 2020 Transition Paper_10.15.20_final.docx; Affordable clean energy rule and clean power plan repeal litigation.docx; SAFE 1 rule (withdrawal of CA waiver for light duty GHG ZEV standards).docx; SAFE 2 rule (GHG light duty vehicle standards).docx; Selected legal hot topics and litigation cases.docx

Karl, the meeting has not been confirmed and is on your calendar for today at 2p. For ease of reference, I am attaching OAR's transition papers as well as OGC's papers. Please let me know if you have any questions or need anything additional.

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Campbell, Ann
Sent: Tuesday, December 1, 2020 9:35 AM
To: Karl Moor (Moor.Karl@epa.gov) <Moor.Karl@epa.gov>
Cc: Idsal, Anne <idsal.anne@epa.gov>; Raymond, Kelley <Raymond.Kelley@epa.gov>; Shaw, Betsy <Shaw.Betsy@epa.gov>; Kabanda, Thierry <Kabanda.Thierry@epa.gov>
Subject: FW: Transition Team Meeting Today

Karl, we are awaiting confirmation from the OA on OAR's first transition meeting today on vehicles and climate. It is tentatively scheduled for 2-3 with Sarah and Chris. Betsy and I both plan to join as well. Looks like Anne unfortunately has conflict but your schedule looks clear. Are you able to join us today?

Thank you,

Ann (Campbell) Ferrio
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

THE MONTREAL PROTOCOL AND HYDROFLUOROCARBONS

ISSUE SUMMARY:

The Montreal Protocol is a well-established multilateral environmental treaty that is phasing out the production and consumption of substances that deplete the ozone layer, successfully preventing massive damage to human health and the environment from excessive exposure to ultraviolet (UV) radiation. Significant and consistent engagement by the United States ensures that all decisions taken under the treaty comport with U.S. goals and domestic authorities. The 2016 Kigali Amendment to the Montreal Protocol calls for the countries that ratify the amendment to implement a gradual reduction in the production and consumption of hydrofluorocarbons (HFCs), chemicals developed to replace ozone-depleting substances (ODS) in all the same applications as ODS. The White House convened an interagency group and in 2019 decided not to pursue U.S. ratification of the Kigali Amendment at that time. A number of states have developed and/or finalized regulations to control HFCs. The House passed and the Senate has introduced bills that would establish a domestic phasedown of HFCs using the same schedule to the Kigali Amendment. The EPA likely will continue to be asked for technical assistance on legislation and to potentially prepare updated legal and/or economic analyses regarding implementation of the Kigali Amendment.

UPCOMING MILESTONES:

- **Early-mid 2021:** Continued technical assistance and potentially preparatory work to facilitate actions consistent with any future legislation.
- **2021 Spring, Summer, and Fall meetings of the Montreal Protocol** – Even while work continued virtually in 2020 between parties to the Montreal Protocol, special meetings are scheduled in March 2021 for items that require in-person negotiations, including decisional meetings to respond to unexpected emissions of controlled substances, promote maintaining or improving energy efficiency during equipment transitions, and replenish the Multilateral Fund to assist developing country compliance. In addition, there will be meetings of the Executive Committee of the Multilateral Fund in 2021.
- **Early 2021:** EPA intends to issue a new proposed rule regarding the scope and applicability of Clean Air Act (CAA) section 612 Significant New Alternatives Policy (SNAP) program for ODS alternatives to address D.C. Circuit court decisions on regulations issued in 2015 and 2016.

BACKGROUND:

Stratospheric ozone is our defense against harmful UV radiation. When ODS are emitted to the atmosphere, they destroy ozone molecules and thin the ozone layer, allowing more UV radiation to reach the Earth's surface. Overexposure to UV radiation can cause a range of serious health effects, from skin cancer and cataracts to suppression of our immune system. UV radiation can also damage sensitive crops, which reduces crop yields, and harm marine phytoplankton with potentially profound effects on the food chain. Actions under the CAA and the *Montreal Protocol on Substances that Deplete the Ozone Layer* (Montreal Protocol) mean that the ozone layer is expected to recover to pre-1980 levels by mid-century. In a [[HYPERLINK](https://www.epa.gov/sites/production/files/2020-04/documents/2020_ahef_report.pdf)

"https://www.epa.gov/sites/production/files/2020-04/documents/2020_ahef_report.pdf"], the EPA estimates that the full

implementation of the Montreal Protocol will prevent approximately 443 million cases of skin cancer and 63 million cases of cataracts in the United States alone. HFCs are widely used in refrigeration and air-conditioning applications. As a consequence of the ODS phase-out and the global demand for refrigeration and air conditioning, use of HFCs has been rising fast. The Kigali Amendment is the fifth amendment to the Montreal Protocol and it is the first to address HFCs, which are not considered ODS but are potent greenhouse gases. The Kigali Amendment has entered into force given more than 100 countries have joined the Kigali Amendment. If all countries were to implement the Kigali Amendment's obligations, cumulative emissions through 2050 of over 80 billion metric tons of carbon dioxide equivalent and up to 0.4 degree Celsius of warming by 2100 would be avoided.

The House and Senate are actively negotiating HFC phasedown legislation (e.g., Title IX of HR 4447, passed September 24, 2020 includes HFC provisions and the Senate Energy and Public Works committee in mid-September announced agreement on a revised version of S. 2754).

In 2015 and 2016, the EPA issued regulations under its SNAP program that changed the status of certain HFCs used in specific applications, from acceptable to unacceptable. The D.C. Circuit court issued decisions that have resulted in the EPA's development of a new proposed rule that relooks at aspects of the 1994 SNAP framework rule to limit the scope and applicability of the SNAP program authorized under CAA Section 612. The court concluded that EPA did not have authority under Section 612 to require the replacement of a non-ODS with another non-ODS. The court vacated the 2015 rule "to the extent it requires manufacturers to replace HFCs with a substitute substance" and issued similar direction with regards to the 2016 rule.

KEY EXTERNAL STAKEHOLDERS:

☒ Congress ☒ Industry ☒ States ☐ Tribes ☒ Media ☒ Other Federal Agency
☒ NGO ☐ Local Government ☒ Other: Foreign Governments

Industry stakeholders and environmental organizations have supported the EPA's implementation of the Montreal Protocol and CAA provisions to address ODS. The vast majority of the affected U.S. business community supports U.S. ratification of the Kigali Amendment and the HFC legislation because they believe an HFC phasedown will 1) reinforce the U.S. competitive advantage in high-efficiency and innovative refrigeration and air conditioning equipment/technology, 2) help avoid a fragmented domestic market from State action in the absence of a national-level approach, and 3) prevent dumping of Chinese-made HFCs on the U.S. market. Notably, certain groups, including the Heritage Foundation and the Competitive Enterprise Institute, oppose both the Kigali Amendment and domestic legislation.

MOVING FORWARD:

Next steps include assessing options for addressing any future legislation on an HFC phasedown and continuing to successfully phase out ODS to ensure the full recovery of the ozone layer while proposing and finalizing changes to the SNAP program. The U.S. is positioned to phase down HFCs consistent with the draft legislation given the U.S. has already taken similar actions to address ODS and has some regulations and partnerships in place that encourage

THE MONTREAL PROTOCOL AND HYDROFLUOROCARBONS

transition and have the effect of limiting HFC emissions in some contexts. However, EPA would need to take a number of regulatory actions and expand partnership efforts to fully stand up an HFC program.

Message

From: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Sent: 12/1/2020 2:28:22 PM
To: Cory, Preston [Cory.Preston@epa.gov]; Idsal, Anne [idsal.anne@epa.gov]; Landeene, Sarah [Landeene.Sarah@epa.gov]
CC: Raymond, Kelley [Raymond.Kelley@epa.gov]; Tardif, Abigale (Abbie) [Tardif.Abigale@epa.gov]
Subject: RE: PM Comms plan and tough Q&A
Attachments: DRAFT PM NAAQS Comms Plan 12.1.docx

Many thanks, all! Attached is a clean copy. I'll go ahead and share with OPA, if that works for everyone.

From: Cory, Preston
Sent: Tuesday, December 01, 2020 9:19 AM
To: Idsal, Anne <idsal.anne@epa.gov>; Landeene, Sarah <Landeene.Sarah@epa.gov>
Cc: DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Raymond, Kelley <Raymond.Kelley@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: RE: PM Comms plan and tough Q&A

Ex. 5 Deliberative Process (DP)

From: Idsal, Anne <idsal.anne@epa.gov>
Sent: Tuesday, December 1, 2020 9:08 AM
To: Landeene, Sarah <Landeene.Sarah@epa.gov>
Cc: DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Raymond, Kelley <Raymond.Kelley@epa.gov>; Cory, Preston <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: RE: PM Comms plan and tough Q&A

Thanks! Looks good.

From: Landeene, Sarah <Landeene.Sarah@epa.gov>
Sent: Tuesday, December 1, 2020 8:26 AM
To: Idsal, Anne <idsal.anne@epa.gov>
Cc: DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Raymond, Kelley <Raymond.Kelley@epa.gov>; Cory, Preston <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: RE: PM Comms plan and tough Q&A

Anne,

Sounds good. Attached is the comms plan **Ex. 5 Deliberative Process (DP)** If there are any other questions or concerns, please let me know.

Thank you,
Sarah

From: Idsal, Anne <idsal.anne@epa.gov>
Sent: Monday, November 30, 2020 10:47 PM
To: Landeene, Sarah <Landeene.Sarah@epa.gov>
Cc: DeLuca, Isabel <DeLuca.Isabel@epa.gov>; Raymond, Kelley <Raymond.Kelley@epa.gov>; Cory, Preston <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: Re: PM Comms plan and tough Q&A

Ex. 5 Deliberative Process (DP)

Anne L. (Idsal) Austin
Principal Deputy Assistant Administrator - Office of Air and Radiation
U.S. EPA

On Nov 30, 2020, at 5:50 PM, Landeene, Sarah <Landeene.Sarah@epa.gov> wrote:

Hi Isabel,

Thank you for getting this to us and for the clarification. Copying Anne for her sign off.

Anne – Attached are the latest versions of the PM NAAQS comms materials. Please let me know if this is good to go down to OPA.

Thank you,
Sarah

From: DeLuca, Isabel <DeLuca.Isabel@epa.gov>
Sent: Monday, November 30, 2020 5:09 PM
To: Landeene, Sarah <Landeene.Sarah@epa.gov>
Cc: Raymond, Kelley <Raymond.Kelley@epa.gov>; Cory, Preston <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: RE: PM Comms plan and tough Q&A

Hi Sarah,
Attached are nearly clean versions of the docs that accept your changes. I left in one comment in the

Ex. 5 Deliberative Process (DP)

you added for clarity.

If this looks good to you, I can clean up that one comment bubble and send on to OPA. (If you'd prefer to send up, just let me know.)

Thanks,
Isabel

From: Landeene, Sarah
Sent: Monday, November 30, 2020 9:14 AM
To: DeLuca, Isabel <DeLuca.Isabel@epa.gov>
Cc: Raymond, Kelley <Raymond.Kelley@epa.gov>; Cory, Preston <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: RE: PM Comms plan and tough Q&A

Hi Isabel,

I Hope you had a wonderful Thanksgiving! I wanted to follow up on the PM comms materials. Please let me know if you need anything further from the IO for the updated version. The Administrator has

decided to hold events in Kentucky and West Virginia for the rollout, most likely next week, so we would like to move things along as quickly as we can.

Thank you again,
Sarah

From: Landeene, Sarah
Sent: Wednesday, November 25, 2020 10:54 AM
To: DeLuca, Isabel <DeLuca.Isabel@epa.gov>
Cc: Raymond, Kelley <Raymond.Kelley@epa.gov>; 'Preston Cory (Katherine)' (<Cory.Preston@epa.gov>') <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>; Idsal, Anne <idsal.anne@epa.gov>
Subject: RE: PM Comms plan and tough Q&A

Isabel,

Attached is the updated draft PM NAAQS comms plan with Anne's edits. We added two additional questions to the Q&A, edits to the topline, and edits to the press release.

If you have any questions or concerns, please let me know.

Best,
Sarah

From: Landeene, Sarah
Sent: Tuesday, November 24, 2020 6:58 PM
To: Idsal, Anne <idsal.anne@epa.gov>
Cc: Raymond, Kelley <Raymond.Kelley@epa.gov>; 'Preston Cory (Katherine)' (<Cory.Preston@epa.gov>') <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: RE: PM Comms plan and tough Q&A

Anne and Isabel,

Kelley and I had made a few additional edits to the comms plan earlier today before receiving the clean version from Isabel this afternoon. Apologies for not catching this sooner! Attached is the most recent draft from Isabel, along with our additional edits (see press release on page 6, and additional bullet points on page 7). Also, reattaching the updated Q&As from Isabel.

If you have any questions or concerns, please let me know.

Thank you,
Sarah

From: Landeene, Sarah
Sent: Tuesday, November 24, 2020 4:02 PM
To: Idsal, Anne <idsal.anne@epa.gov>
Cc: Raymond, Kelley <Raymond.Kelley@epa.gov>; Preston Cory (Katherine) (<Cory.Preston@epa.gov>') <Cory.Preston@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>
Subject: FW: PM Comms plan and tough Q&A

Anne,

Attached is the latest PM NAAQS comms plan. We wanted to make sure you had time to review this before sending to OPA.

Best,
Sarah

From: DeLuca, Isabel <DeLuca.Isabel@epa.gov>

Sent: Tuesday, November 24, 2020 3:29 PM

To: Cory, Preston <Cory.Preston@epa.gov>; Raymond, Kelley <Raymond.Kelley@epa.gov>; Landeene, Sarah <Landeene.Sarah@epa.gov>; Tardif, Abigale (Abbie) <Tardif.Abigale@epa.gov>

Subject: PM Comms plan and tough Q&A

Hi all,

Attached is the latest comms plan for PM NAAQS. This accepts the comments that Preston sent, and is mostly clean. I've left two comment bubbles, one that answers a question from Preston, and one that has a question for you (Kelley, I'm thinking this might be in your lane).

Also attached is the latest Q&A. This includes responses to the additional questions Preston has suggested.

If this looks good to you, please let me know and I'll send over to OPA.

Many thanks,
Isabel

Isabel DeLuca
Office of Air and Radiation, US EPA
(202) 343-9247

<DRAFT PM NAAQS Comms Plan 11.30.docx>
<PM NAAQS DRAFT QsAs11.30.docx>

Message

From: Fotouhi, David [Fotouhi.David@epa.gov]
Sent: 1/4/2021 6:33:41 PM
To: Idsal, Anne [idsal.anne@epa.gov]
Subject: FW: Petitions
Attachments: CEI_Petition_Endangerment_2017.pdf; ef-epa-petitionforreconsiderationof-ef-final-1.pdf; Liberty-v.-EPA-Petition.pdf

Anne, are these the petitions that you intend to raise at tomorrow's check-in, or are there others? Thanks.

David Fotouhi

Acting General Counsel
U.S. Environmental Protection Agency
Tel: +1 202.564.1976
fotouhi.david@epa.gov

From: Harlow, David <harlow.david@epa.gov>
Sent: Monday, January 4, 2021 9:32 AM
To: Fotouhi, David <Fotouhi.David@epa.gov>
Subject: RE: Petitions

David,

Sorry. I had, of course, completely forgotten.

Nevertheless, attached is what I was thinking of. Whether this is what we had been talking about last week (*i.e.*, what you were thinking about), I'm less certain.

David S. Harlow
Senior Counsel
Office of Air and Radiation, USEPA
WJC-N Room 5409K
1200 Pennsylvania Avenue NW
Washington, DC 20460
202-564-1233
Harlow.David@epa.gov
5 U.S.C. § 3331

-----Original Message-----

From: Fotouhi, David <Fotouhi.David@epa.gov>
Sent: Monday, January 4, 2021 9:14 AM
To: Harlow, David <harlow.david@epa.gov>
Subject: Petitions

David, were you able to track down the endangerment finding petitions?

Sent from my iPhone

United States Environmental Protection Agency

Petition of the

Competitive Enterprise Institute and the Science and Environmental Policy Project

for Rulemaking on the Subject of Greenhouse Gases

and Their Impact on Public Health and Welfare,

in Connection with EPA's 2009 Endangerment Finding, 74 FR 66,496 (Dec. 15, 2009)

Competitive Enterprise Institute
1310 L Street, NW, 7th Floor
Washington, D.C. 20005
(202) 331-1010

Sam Kazman, General Counsel
Hans Bader, Senior Counsel

February 17, 2017
(corrected February 23)

PETITION FOR RULEMAKING ON THE ISSUE OF GREENHOUSE GASES AND PUBLIC HEALTH AND WELFARE

Petitioners Competitive Enterprise Institute, the Science and Environmental Policy Project, and four individual members of the latter's Board of Directors hereby petition EPA to initiate a rulemaking proceeding on the subject of greenhouse gases and their impact on public health and welfare.

EPA addressed this matter in 2009 in its "Endangerment Finding." EPA, Final Rule, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 FR 66,496 (Dec. 15, 2009). However, as explained below, since that finding was issued, evidence has continued to mount that directly contradicts it. For these reasons, we request that EPA commence a new proceeding on this matter.

Procedural Background

We bring this petition pursuant to 5 U.S.C. § 553(e), which grants any "interested person the right to petition for the issuance, amendment, or repeal of a rule." A rulemaking proceeding is appropriate when new developments demonstrate that an existing rule or finding rests on erroneous factual premises, and a rulemaking petition is a proper vehicle for asking an agency "to reexamine" the "continuing vitality" of a rule.¹ EPA's own website expressly notes the applicability of section 553(e) to the environmental statutes that it administers. EPA, Petitions for Rulemaking, <https://www.epa.gov/aboutepa/petitions-rulemaking>.²

Identity and Interest of the Petitioners

The Competitive Enterprise Institute (CEI) is a non-profit, 501(c)(3) public policy organization that focuses on issues of overregulation, especially its implications for affordable energy. CEI was founded in 1984 and is headquartered in Washington, D.C.

The Science and Environmental Policy Project (SEPP) is a non-profit 501(c)(3) organization, incorporated in 1993 in the State of Virginia for the purpose of promoting sound and credible science as the basis for regulatory decisions.

¹ *Geller v. FCC*, 610 F.2d 973, 978–80 (D.C. Cir. 1979) (overturning agency's denial of petition for new rulemaking). An agency's "refusal to initiate a rulemaking naturally sets off a special alert when a petition has sought modification of a rule on the basis of a radical change in its factual premise." *American Horse Protection Ass'n v. Lyng*, 812 F.2d 1, 5 (D.C. Cir. 1987) (overturning agency's denial of petition for rulemaking in light of agency's failure to offer a satisfactory explanation). Alternatively, EPA may choose to treat our filing as a petition for reconsideration of its Endangerment Finding. The procedural basis for doing so is discussed in *Concerned Household Electricity Consumers Council et al., Petition for Reconsideration of "Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act"* (filed Jan. 20, 2017), at 1-5.

² See, e.g., *Commonwealth of Va. v. EPA*, 108 F.3d 1397, 1402 n.3 (D.C. Cir. 1997) (successful challenge to ozone pollution rule by Virginia) ("any interested person has 'the right to petition' EPA 'for the issuance, amendment, or repeal' of any rule. 5 U.S.C. § 553(e)"), *decision modified on reh'g*, 116 F.3d 499 (D.C. Cir. 1997).

The individual petitioners, who are members of SEPP's Board of Directors, are the following: Donna Bethell (DC), Kenneth A. Haapala (VA), Thomas Sheahen (MD), and S. Fred Singer (VA). They are citizens of the United States who reside in the jurisdictions indicated for each of them. They and/or the households to which they belong pay utility bills that are affected by EPA regulations that are based, directly or indirectly, on the Endangerment Finding – such as the Clean Power Plan, 80 FR at 64,662 (codified at 40 C.F.R. § 60.5700 *et seq.*), which threatens to increase the cost of electricity.³ Thus, they are not only interested parties, but have standing to judicially challenge the Endangerment Finding given the new facts cited in this petition.⁴

The Lines of Evidence for EPA's Endangerment Finding

EPA's 2009 Endangerment Finding described its scientific basis in the following terms:

“The attribution of observed climate change to anthropogenic activities is based on multiple lines of evidence. The first line of evidence arises from the basic physical understanding of the effects of changing concentrations of GHGs, natural factors, and other human impacts on the climate system. The second line of evidence arises from indirect, historical estimates of past climate changes that suggest that the changes in global surface temperature over the last several decades are unusual. The third line of evidence arises from the use of computer-based climate models to simulate the likely patterns of response of the climate system to different forcing mechanisms (both natural and anthropogenic).”

74 FR 66,518 (footnote omitted).

But as discussed below, in the seven years since the Endangerment Finding was issued, new evidence and research has cast serious doubt on the validity of its three lines of evidence.

I. There Has Been No Statistically Significant Atmospheric Warming Despite a Continued Increase in Atmospheric Carbon Dioxide Levels; This Seriously Undercuts the Endangerment Finding's First Line of Evidence Regarding an Adequate Understanding of Climate

Prior to 2016, the atmospheric temperatures showed the warmest year on record to be 1998. The atmospheric carbon dioxide concentration for December of that year was 367.13 part per million (ppm).⁵

³ See, e.g., Concerned Household Electricity Consumers Council, *Petition for Reconsideration*, *supra* n.1, at 5–8 (describing in detail how the Endangerment Finding leads to increased electricity costs).

⁴ See *CEI v. NHTSA*, 901 F.2d 107, 111–13 (D.C. Cir. 1990) (regulations that allegedly resulted in “high prices” for “large cars” could be challenged by group whose members sought “opportunity to buy” them); *Energy Action Educ. Found. v. Andrus*, 654 F.2d 735, 756 n.** (D.C. Cir. 1980) (consumers had standing to challenge activities claimed to “inflat[e] prices, limit[] supplies, and restrict[] choice on the market”), *rev'd on other grounds*, 454 U.S. 151 (1981); *Community Nutrition Inst. v. Block*, 698 F.2d 1239, 1248 (D.C. Cir. 1983), *rev'd on other grounds*, 467 U.S. 340 (1984) (consumers could challenge exactions imposed on milk handlers, which allegedly would be passed on to consumers).

⁵ http://afip.cmdl.noaa.gov/products/trends/co2/co2_mm_mlo.txt

The past year, 2016, was reportedly warmer than 1998 by 0.02 deg. C.⁶ The atmospheric carbon dioxide concentration in December 2016 was 404.48 ppm.⁷

Despite this 10 percent increase in atmospheric CO₂ concentrations, however, the temperature difference between 1998 and 2016 was not statistically significant. As Dr. Roy Spencer of the University of Alabama in Huntsville has pointed out, “2016 would have had to be 0.10 C warmer than 1998 to be significantly different at the 95% confidence level.”⁸ In fact, the temperature difference between the two years was only one fifth of that amount.

In its Endangerment Finding, EPA acknowledged that “there have not been strong trends over the last seven to ten years in global surface temperature or lower troposphere temperatures measured by satellites.” 74 FR 66,522. EPA claimed, however, that “this pause in warming should not be interpreted as a sign that the Earth is cooling or that the science supporting continued warming is in error. Year-to-year variability in natural weather and climate patterns make it impossible to draw any conclusions about whether the climate system is warming or cooling from such a limited analysis.” *Id.*

Here, however, the absence of any strong warming trend has continued for 18 years. That is twice as large as the 2001–09 time period touted in the Finding as containing “eight of the 10 warmest years on record.” *Id.* Moreover, the fact that the starting and end years for this 18-year period are the two reportedly warmest years on record makes the lack of warming all the more significant. In short, the absence of a strong warming trend in the face of increasing atmospheric CO₂ concentrations cannot be dismissed, yet again, as being based on an overly “limited analysis.” It draws into serious question EPA’s contention that we have an adequate “physical understanding of the effects of changing concentrations of GHGs ... on the climate system.” 74 FR 66,518.

II. Contrary to the Endangerment Finding’s Second Line of Evidence, Changes in Global Temperatures in Recent Decades Are Far From Unusual

The Endangerment Finding states that “indirect, historical estimates of past climate changes ... suggest that the changes in global surface temperature over the last several decades are unusual.” 74 FR 66,518. But a more recent, comprehensive review of the scientific literature comes to exactly the opposite conclusion:

- “Over recent geological time, Earth’s temperature has fluctuated naturally between about +4°C and -6°C with respect to twentieth century temperature. A warming of 2°C above today, should it occur, falls within the bounds of natural variability;”

⁶ *Global Temperature Report: December, 2016*, Earth System Science Center, Univ. of AL at Huntsville, http://www.nsstc.uah.edu/climate/2016/december/dec2016_GTR.pdf

⁷ See n.5.

⁸ Roy Spencer, Ph.D., *Global Satellites: 2016 not Statistically Warmer than 1998*, DRROYSPENCER.COM, (Jan. 3, 2017), <http://www.drroyspencer.com/2017/01/global-satellites-2016-not-statistically-warmer-than-1998/>.

- “At the current level of ~400 ppm we still live in a CO₂-starved world. Atmospheric levels 15 times greater existed during the Cambrian Period (about 550 million years ago) without known adverse effects.”
- The overall warming since about 1860 corresponds to a recovery from the Little Ice Age modulated by natural multidecadal cycles driven by ocean-atmosphere oscillations, or by solar variations at the de Vries (~208 year) and Gleissberg (~80 year) and shorter periodicities.”
- “The causes of historic global warming remain uncertain, but significant correlations exist between climate patterning and multidecadal variation and solar activity over the past few hundred years.”⁹

Similarly, a comprehensive new study of 13 complete temperature data sets (nine in the tropics, one in the U.S. and three global) found that “once just the ENSO [El Nino Southern Oscillation] impacts on temperature data are accounted for, there is no ‘record setting’ warming to be concerned about.”¹⁰

For these reasons, the Finding’s second line of evidence should be reconsidered.

III. The Growing Accumulation and Refinement of Balloon and Satellite Data Demonstrates that the Atmosphere Is Far Less Sensitive to CO₂ Forcing than Predicted by the Climate Models; As a Result, EPA’s Third Line of Evidence Is No Longer Valid

EPA’s Endangerment Finding expressly noted the importance of global atmospheric temperature as a “reasonable indicator of human-induced climate change.” 74 FR at 66,522 (capitalization omitted). However, EPA largely ignored the two most precise methods for measuring atmospheric temperature, satellites and weather balloons. The Finding contained no discussion at all of balloon temperature data, and there was only one brief discussion of satellite temperature data. *Id.* Computer-based climate models, on the other hand, received far more attention. EPA characterized these models as “well tested,” and they were singled out by EPA as constituting the Finding’s “third line of evidence.”

But as demonstrated by the congressional testimony of John R. Christy, Director of the Earth System Science Center at the University of Alabama, the continued accumulation of both satellite and balloon data has thrown increasing doubt over two of EPA’s three lines of evidence. Contrary to the Finding’s claim that we have a “basic physical understanding of ... the climate system,” Christy concludes that “the theory of how climate changes occur, and the associated impact of extra greenhouse gases, is not understood well enough to even reproduce the past

⁹ Idso, Carter, and Singer, *Climate Change Reconsidered II: Physical Science* (2013), <https://www.heartland.org/media-library/pdfs/CCR-II/CCR-II-Full.pdf>; *Summary for Policymakers*: http://climatechangereconsidered.org/wp-content/uploads/2016/08/09-25-2013_-CCR-II-Summary-for-Policymakers.pdf, p.4.

¹⁰ Wallace, Christy, and D’Aleo, *On the Existence of a “Tropical Hotspot” & the Validity of EPA’s CO₂ Endangerment Finding* (Aug. 2016), at pp. 4 and 13, Table II-1, <https://thsresearch.files.wordpress.com/2016/10/ef-cpp-sc-2016-data-ths-paper-ex-sum-101416.pdf>.

climate.” Prepared Testimony of John R. Christy to the U.S. House Committee on Science, Space and Technology (Feb. 2, 2016), p.2, <https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-114-SY-WState-JChristy-20160202.pdf>, attached hereto.

As Dr. Christy explains, both surface temperature stations and water temperature suffer from a number of problems. Stations are affected by “the growth of infrastructure” around them and by the “variety of changes” that they “undergo through time.” Christy at 6. Water temperature readings “do not track well with those of the air temperature just above the water ... even if both are measured on the same buoy over 20 years.” *Id.*

Satellite and balloon data do not suffer from these problems. Moreover, the fact that balloon and satellite data correlate extremely well with one another despite their being collected through distinctly different methods makes their results far more reliable. “To be sure, satellite and balloon temperatures require their own adjustments and cannot be considered ‘perfect’, but do offer an independence from one another to allow direct comparison studies.” *Id.* at 7.

Based on this data, Dr. Christy’s essential conclusion is that the computer models “clearly overcook the atmosphere,” *Id.* 2. They project a far higher rate of warming than actually observed—2.5 times faster generally, and 3 times faster for the tropical atmosphere. *Id.* at 4–5. The models were “demonstrably deficient.” *Id.* at 2. They “failed at the simple test of telling us ‘what’ has already happened, and thus would not be in a position to give us a confident answer to ‘what’ may happen in the future and ‘why.’” *Id.* at 12. And Dr. Christy emphasized the fact that the 37-year period that he had examined is “the period with the highest concentration of greenhouse gases and thus the period in which the response should be of largest magnitude.” *Id.*

In short, EPA’s claim in its Endangerment Finding that the climate models are “well-tested” no longer bears scrutiny, and its third line of evidence clearly needs to be reconsidered.

IV. Given the Mounting Evidence that EPA’s Greenhouse Gas Regulations Will Have No Discernible Climate Impact, the Rationale for Its Endangerment Finding Requires Reexamination

In its Finding, EPA gave the following analogy for endangerment:

“The question of whether there is endangerment is like the question of whether there is an illness. Once one knows there is an illness, then the next question is what to do, if anything, in response to that illness.”

74 FR 66,515.

But as Dr. Christy noted in his testimony, even a total *elimination* of U.S. emissions would have a near zero impact on global climate. As he put it, if the U.S. were simply to vanish, after 50 years there would be no discernible global temperature difference, given the satellite and balloon data findings regarding atmospheric sensitivity: “the impact ... would be only 0.05 to 0.08 degrees C – an amount less than that which the global temperature fluctuates from month to

month.” Christy at 14. Given this impossibility of treating the “illness” supposedly identified by EPA’s Finding, the basis for making the Finding in the first place needs reconsideration.

This point is buttressed by testimony last year from then-EPA Administrator Gina McCarthy, when she stated that the alleged environmental benefits of EPA’s massive Clean Power Plan were not purpose. At a March 22, 2016, congressional hearing, one U.S. Representative asked her: “I don’t understand – if it doesn’t have an impact on climate change around the world, why are we subjecting our hard working taxpayers and men and women in the coal fields to something that has no benefit?”¹¹

Gina McCarthy’s answer: “We see it as having had enormous benefit in showing [the] sort of domestic leadership as well as garnering support around the country for the agreement we reached in Paris.”

CONCLUSION

As shown above, there is significant new data and research that seriously undercuts each of the Endangerment Finding’s lines of evidence. For these reasons, EPA should conduct a new rulemaking on this issue.

Respectfully submitted on behalf of CEI, SEPP, Donna Bethell, Kenneth A. Haapala, Thomas Sheahen, and S. Fred Singer.

Dated: February 17, 2017
(corrected Feb. 23)

/s/ Sam Kazman
Sam Kazman
Hans Bader
Competitive Enterprise Institute
1310 L St., NW, 7th Floor
Washington, D.C. 20005
(202) 331-1010
Attorneys for Petitioners

¹¹ *Fiscal Year 2017 EPA Budget: Hearing Before the H. Comm. on Energy and Commerce, Subcomm. on Energy and Power*, 114th Cong. at 73–74 (Mar. 22, 2016) (testimony of EPA Administrator Gina McCarthy), available at <http://docs.house.gov/meetings/IF/IF03/20160322/104715/HHRG-114-IF03-Transcript-20160322.pdf>.

ATTACHMENT

U.S. House Committee on Science, Space & Technology

2 Feb 2016

Testimony of John R. Christy

University of Alabama in Huntsville.

I am John R. Christy, Distinguished Professor of Atmospheric Science, Alabama's State Climatologist and Director of the Earth System Science Center at The University of Alabama in Huntsville. I have served as Lead Author, Contributing Author and Reviewer of United Nations IPCC assessments, have been awarded NASA's Medal for Exceptional Scientific Achievement, and in 2002 was elected a Fellow of the American Meteorological Society.

It is a privilege for me to offer my analysis of the current situation regarding (1) the temperature datasets used to study climate, (2) our basic understanding of climate change and (3) the effect that regulations, such as the Paris agreement, might have on climate. I have also attached an extract from my Senate Testimony last December in which I address (1) the popular notion that extreme climate events are increasing due to human-induced climate change (they are not), and (2) the unfortunate direction research in this area has taken.

My research area might be best described as building datasets from scratch to advance our understanding of what the climate is doing and why – an activity I began as a teenager over 50 years ago. I have used traditional surface observations as well as measurements from balloons and satellites to document the climate story. Many of our UAH datasets are used to test hypotheses of climate variability and change.

(1.1) Upper air temperature data from satellites and balloons

I shall begin with a discussion that was precipitated by an increasingly active campaign of negative assertions made against the observations, i.e. the data, of upper air temperatures. Figure 1 in particular has drawn considerable attention from those who view the climate system as undergoing a rapid, human-caused transformation into a climate to which people would have great difficulty adapting. This simple chart tells the story that the average model projection, on which their fears (or hopes?) are based, does poorly for the fundamental temperature metric that is allegedly the most responsive to extra greenhouse gases - the bulk atmospheric temperature of the layer from the surface to 50,000ft. [The layer shown is known as the mid-troposphere or MT and is used because it overlaps with the region of the tropical atmosphere that has the largest anticipated signature of the greenhouse response by bulk mass – between 20,000 and 50,000 feet.] The chart indicates that the theory of how climate changes occur, and the

associated impact of extra greenhouse gases, is not understood well enough to even reproduce the past climate [much more in section (2)]. Indeed, the models clearly over-cook the atmosphere. The issue for congress here is that such demonstrably deficient model projections are being used to make policy.

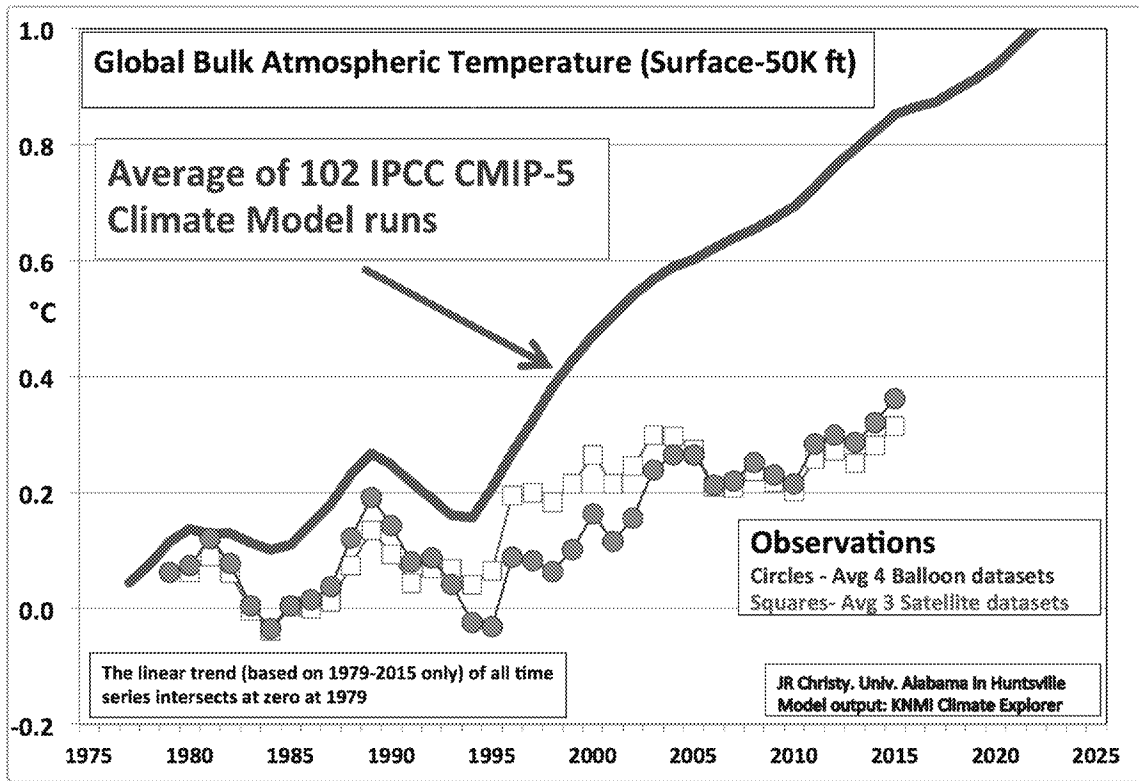


Fig. 1: Five-year averaged values of annual mean (1979-2015) global bulk (termed “mid-tropospheric” or “MT”) temperature as depicted by the average of 102 IPCC CMIP5 climate models (red), the average of 3 satellite datasets (green - UAH, RSS, NOAA) and 4 balloon datasets (blue, NOAA, UKMet, RICH, RAOBCORE).

Because this result challenges the current theory of greenhouse warming in relatively straightforward fashion, there have been several well-funded attacks on those of us who build and use such datasets and on the datasets themselves. As a climate scientist I’ve found myself, along with fellow like-minded colleagues, tossed into a world more closely associated with character assassination and misdirection, found in Washington politics for example, rather than objective, dispassionate discourse commonly assumed for the scientific endeavor. Investigations of us by congress and the media are spurred by the idea that anyone who disagrees with the climate establishment’s view of dangerous climate change must be on the payroll of scurrilous organizations or otherwise mentally

deficient. Also thrust into this milieu is promotional material, i.e., propaganda, attempting to discredit these data (and researchers) with claims that amount to nothing.

Several of these allegations against the data appeared a few weeks ago in the form of a well-made video. I shall address the main assertions with the following material, which in similar form has appeared in the peer-reviewed literature through the years.

The video of interest was promoted by a climate change pressure group (Yale Climate Connections, <http://www.yaleclimateconnections.org/2016/01/over-reliance-on-satellite-data-alone-criticized/>) in which well-known scientists make claims that are mostly meaningless or completely wrong relative to the evidence in Fig. 1. I wish to make four points regarding the video and demonstrate the misdirection for which such agendized videos, along with a happily mimicking media, are so famous.

First, the claim is made the satellites do not measure temperature. In reality, the sensors on satellites measure temperature by emitted radiation - the same method that a physician uses to measure your body temperature to high precision using an ear probe. Atmospheric oxygen emits microwaves, the intensity of which is directly proportional to the temperature of the oxygen, and thus the atmosphere. That the satellites measure temperature is evident by the following chart which compares our UAH satellite data with temperatures calculated from balloon thermistors. As an aside, most surface temperature measurements are *indirect*, using electronic resistance.

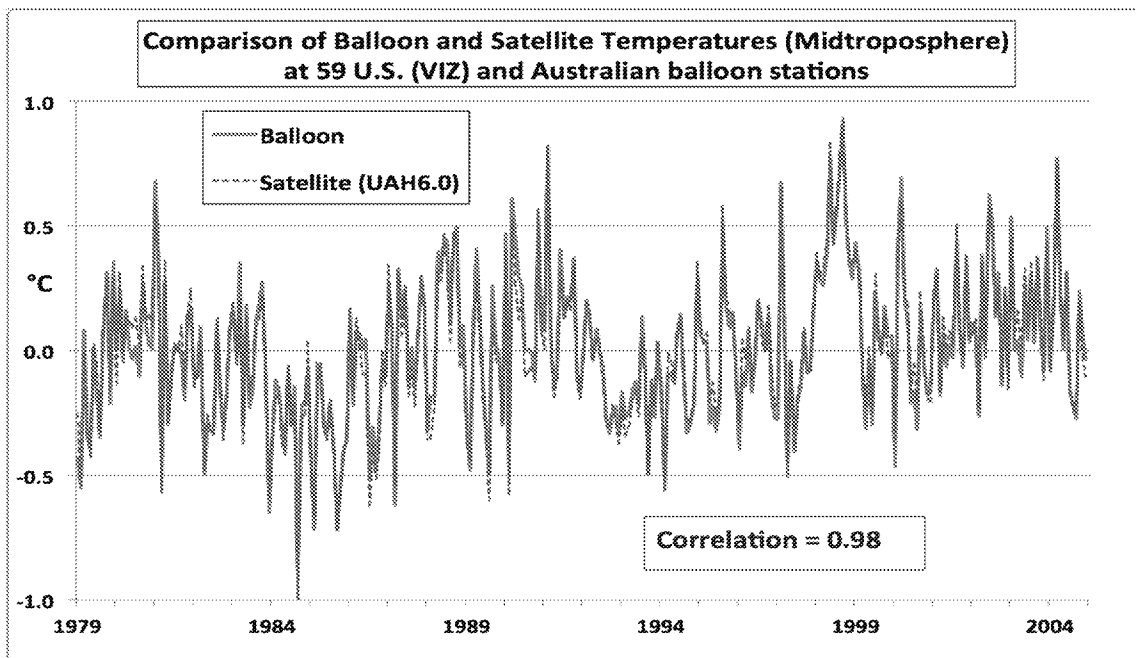


Fig. 2: Average temperature variations measured at 59 radiosonde stations in the U.S. (VIZ manufacturer) and Australia.

Secondly, the scientists claim that the vertical drop (orbital decay) of the satellites due to atmospheric friction causes spurious cooling through time. This vertical fall has an immeasurable impact on the layer (MT) used here and so is a meaningless claim. In much earlier versions of another layer product (LT or Lower Troposphere), this was a problem, but was easily corrected almost 20 years ago. Thus, bringing up issues that affected a different variable that, in any case, was fixed many years ago is a clear misdirection that, in my view, demonstrates the weakness of their position.

Thirdly, the scientists speak of the spurious temperature changes that occur as the satellites drift in the east-west direction, the so-called diurnal drift problem (which was first detected and accounted for by us). They speak of a sign error in the correction procedure that changed the trend. Again, this error was not a factor in the MT layer in Fig. 1, but for the different LT layer. And, again, this issue was dealt with for LT 10 years ago.

Finally, though not specifically mentioned in this video, some of these scientists claim Fig. 1 above is somehow manipulated to hide their belief in the prowess and validity of the climate models. To this, on the contrary, I say that we have displayed the data in its most meaningful way. The issue here is the rate of warming of the bulk atmosphere, i.e., the trend. This metric tells us how rapidly heat is accumulating in the atmosphere – the fundamental metric of global warming. To depict this visually, I have adjusted all of the datasets so that they have a common origin. Think of this analogy: I have run over 500 races in the past 25 years, and in each one all of the runners start at the same place at the same time for the simple purpose of determining who is fastest and by how much at the finish line. Obviously, the overall relative speed of the runners is most clearly determined by their placement as they cross the finish line – but they must all start together.

In the same way I constructed the chart so that the trend line of all of the temperature time series starts at the same point in magnitude and time (zero value at 1979) so the viewer may see how wide the spread is at the finish line (2015). One way to look at this is seen in Fig. 3 where I provide what is seen in Fig. 1 except this is only the trend line without the variations that occur from year due to volcanoes and such. This is analogous to plotting the overall average speed of a runner along the course even though they likely ran slower on an uphill, and faster on a downhill.

This image indicates the models, on average, warm this global layer about 2.5 times faster than the observations indicate. This is a significant difference that has not been

explained and indicates the theory of greenhouse impact on atmospheric temperature is not sufficiently known to even reproduce what has already happened. We are not talking about 10 or 15 years here, but 37 years - well over a third of a century. That two very independent types of measuring systems (balloons and satellites) constructed by a variety of institutions (government, university, private) all showing the much slower rate of warming gives high confidence in its result. Thus, the evidence here strongly suggests the theory, as embodied in models, goes much too far in forcing the atmosphere to retain heat when in reality the atmosphere has a means to relinquish that heat and thus warms at a much slower rate.

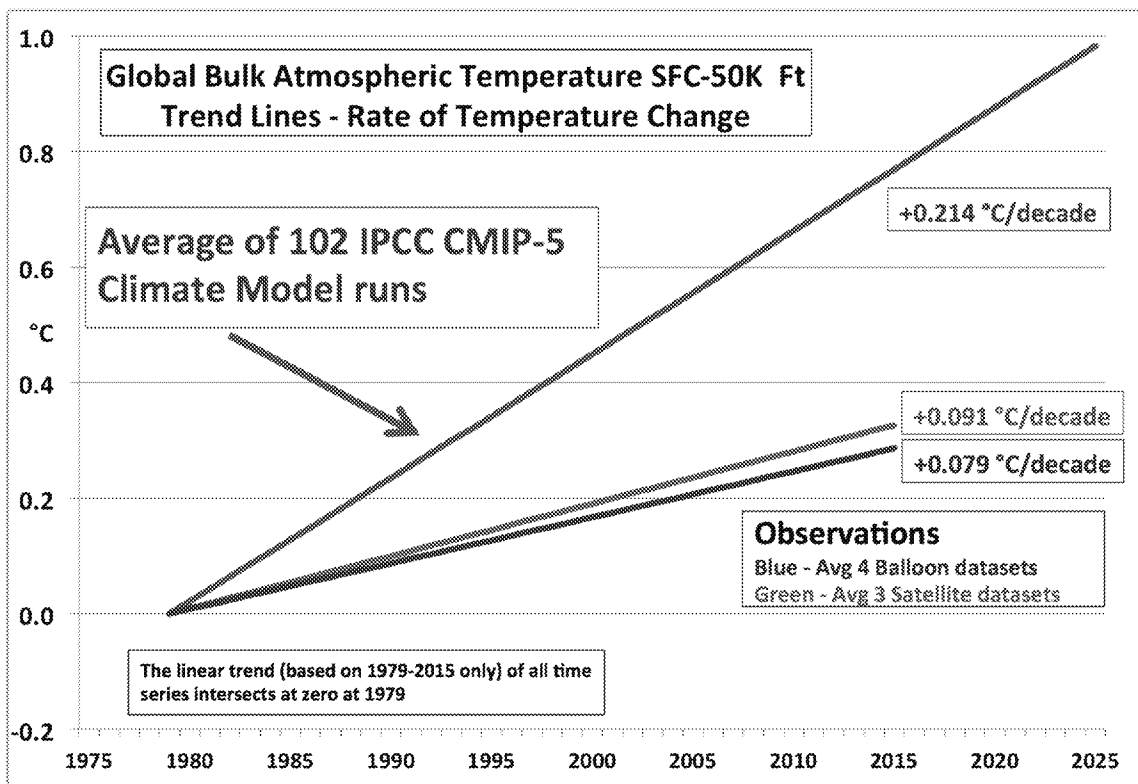


Fig. 3: The linear trend line over the period 1979-2015. The colors represent the same source data as in fig. 1.

I've shown here that for the global bulk atmosphere, the models overwarm the atmosphere by a factor of about 2.5. As a further note, if one focuses on the tropics, the models show an even stronger greenhouse warming in this layer. However, a similar calculation with observations as shown in Fig. 3 indicates the models over-warm the tropical atmosphere by a factor of approximately 3, (Models +0.265, Satellites +0.095, Balloons +0.073 °C/decade) again indicating the current theory is at odds with the facts. (again, see section 2.)

It is a bold strategy in my view to actively promote the output of theoretical climate models while attacking the multiple lines of evidence from observations. Note that none of the observational datasets are perfect and continued scrutiny is healthy, but when multiple, independent groups generate the datasets and then when the results for two completely independent systems (balloons and satellites) agree closely with each other and disagree with the model output, one is left scratching one's head at the decision to launch an offensive against the data. This doesn't make scientific sense to me.

(1.2) Surface temperature issues

There are several issues regarding surface temperature datasets that are too involved to discuss in this material. I shall focus on a few points with which I am familiar and on which I have published.

(1.2.a) Surface temperature as a metric for detecting the influence of the increasing concentrations of greenhouse gases

One of my many climate interests is the way surface temperatures are measured and how surface temperatures, especially over land, are affected by their surroundings. In several papers (Christy et al. 2006 *J. Climate*, Christy et al. 2009 *J. Climate*, Christy 2013 *J. Appl. Meteor. Clim.*, Christy et al. 2016 *J. Appl. Meteor. Clim.*) I closely examined individual stations in different regions and have come to the conclusion that the magnitude of the relatively small signal we seek in human-induced climate change is easily convoluted by the growth of infrastructure around the thermometer stations and the variety of changes these stations undergo through time, as well as the variability of the natural ups and downs of climate. It is difficult to adjust for these contaminating factors to extract a pure dataset for greenhouse detection because often the non-climatic influence comes along very gradually just as is expected of the response to the enhanced greenhouse effect.

In examining ocean temperatures (Christy et al. 2001, *Geophys. Res. Lett.*) I discovered that the trends of the water temperature (1m depth) do not track well with those of the air temperature just above the water (3m), even if both are measured on the same buoy over 20 years. This is important for the discussion below where NOAA used marine air temperatures to adjust water temperature measurements from ships.

There are many other factors that render surface temperature datasets to be of low effectiveness for the detection of enhanced greenhouse warming, (a) lack of systematic geographical coverage in time, (b) unsystematic measuring methods and instrumentation

in time and space, (c) the point measurement represents at best a tiny, local area and (d) is easily impacted by slight changes in the surroundings, which can occur for example when a station moves. There have been huge efforts to try and adjust the raw surface data to give a time series that would represent that of a pristine environment, and I have led or been a part in some of these (e.g. for Central California in Christy et al. 2006 and East Africa in Christy et al. 2009 and Christy 2013).

Thus, having experience in building surface, satellite and balloon temperature datasets, and taking into account the signal we are looking for to detect the enhanced greenhouse effect, the evidence suggests to me that utilizing the bulk atmospheric measurements provides the best opportunity to answer questions about the climate's response to this human-induced change in atmospheric composition. The deep atmosphere is much more coherent in space and time in terms of its variations. It is not affected by human development at the surface. It is measured systematically. To be sure, satellite and balloon temperatures require their own adjustments and cannot be considered "perfect", but do offer an independence from one another to allow direct comparison studies. Regarding the detection of the enhanced greenhouse effect, the troposphere, as indicated by models, happens to be the atmospheric region that will respond the most, i.e. warm the fastest, and thus, in my view, is a metric that provides a better way to detect human influence on the climate.

(1.2.b) The new NOAA surface temperature dataset

A series of papers appeared last year (including Huang et al. 2015 *J. Climate*, Karl et al. 2015 *Science*) describing a new surface temperature dataset constructed by NOAA which indicated a bit more warming in the past 10 to 25 years than the previous versions. The key change dealt with seawater temperatures in the dataset now known as ERSSTv4. This change introduced an additional warming into the record from about 1990 onward. The main reason for this new warming, as the authors note, was the adjustment applied to buoy data, adding about +0.12 °C to the buoy readings. In 1980, only about 10 percent of the data reports were from buoys, but by 2000 about 90 percent were buoy data. Thus, because the influence of the buoy data grew significantly through time, the simple addition of a bias to all the buoys from the beginning created a warmer trend as they became the dominate source of information.

Some background is necessary. Unlike satellite and balloon datasets which measure a systematic quantity (essentially atmospheric air temperature), surface temperature datasets are a mixture of air (over land) and water (over ocean) temperatures measured over a considerable range of instruments, exposures and methods. Over land, weather stations measure the temperature of the air in varying types of instrument shelters and by

varying techniques at a level about 5 ft above the ground. Over the ocean, however, the temperature utilized is that of the water itself, not the air above, so traditional global surface datasets do not measure a homogenous physical parameter over land versus ocean. Further, the depth of the water temperature measurement is quite varied from 2 ft to 50 ft or so, by methods that range from buckets drawn up on deck into which a thermometer is inserted to engine-intake temperatures much deeper in the water and to buoys, drifting or moored to the bottom. So the fact temperature varies by depth is an issue to tackle before the possibility of constructing a systematic dataset may be attempted. Then too, the measurements are not spatially or temporally consistent with large regions, such as Africa and the southern oceans, unmeasured.

Keep in mind that even though the trend of this NOAA dataset became more positive in the past 10 to 20 years, it is still below climate model projections over the longer term. For longer periods, such as the period since 1979 when satellites began measuring bulk atmospheric temperatures, the new global dataset is similar to that of the Hadley Centre (1979-2015: NOAA +0.155 °C/decade, Hadley Centre UKMet, +0.165 °C/decade). However, there are questions that remain concerning the new NOAA seawater dataset, especially how it indicates more warming in the last 20 years than others. Figure 4 displays the ocean trends for the region 20S to 60N (i.e. tropical and northern hemisphere oceans - there was too little data south of 20S for generating near-surface air temperatures there). There are 4 datasets represented, NOAA (NOAA, red), Hadley Centre (HadCRUT4, orange), a preliminary near-surface air temperature over the oceans by my graduate student Rob Junod (yellow) and the UAH deep layer air temperature from satellites (blue). Both NOAA and HadCRUT4 are temperatures of the seawater near the surface, so should be the same.

NOAA used a curious reference variable to calibrate the water temperatures measured from ship intakes – the Night Marine Air Temperature (NMAT). This is curious because there are considerable adjustments required for the NMATs themselves, i.e. corrections for height of ship deck, etc. In any case, from this, the buoy data were then adjusted to match the ship data. It appears, then, that the foundational adjustment process depends on NMATs to adjust the ship data to then adjust the buoy data. The final product from NOAA mixes all of these together, and because the geographic representation of the different systems changed dramatically (as noted, from approximately 10% buoys and 90% ships in 1980 to 90% buoys and 10% ships today – Huang et al. 2015), an adjustment applied to the buoys will automatically influence the trend.

I'm aware that the Committee sought information about this curious process and asked NOAA to generate datasets based only on consistent measuring systems, i.e. ships alone, buoys alone and NMATs alone, to see if one system might have impacted the trends

improperly due to distribution changes. NOAA was unable to accommodate this request. At the same time I asked my graduate student, Rob Junod, to do the work for NMAT. What is presented here is preliminary, but follows much of the previous work on NMATs (developed at the National Oceanographic Centre and the Hadley Centre in the UK) with that added advantage of being updated to 2014. The best geographical data coverage was found to be 20°S to 60°N, so this area was also applied to the other datasets for an apples to apples comparison. The results are shown in Fig. 4 in which all trends end in 2014 but cover periods in two-year increments from 20 years to 10 years.

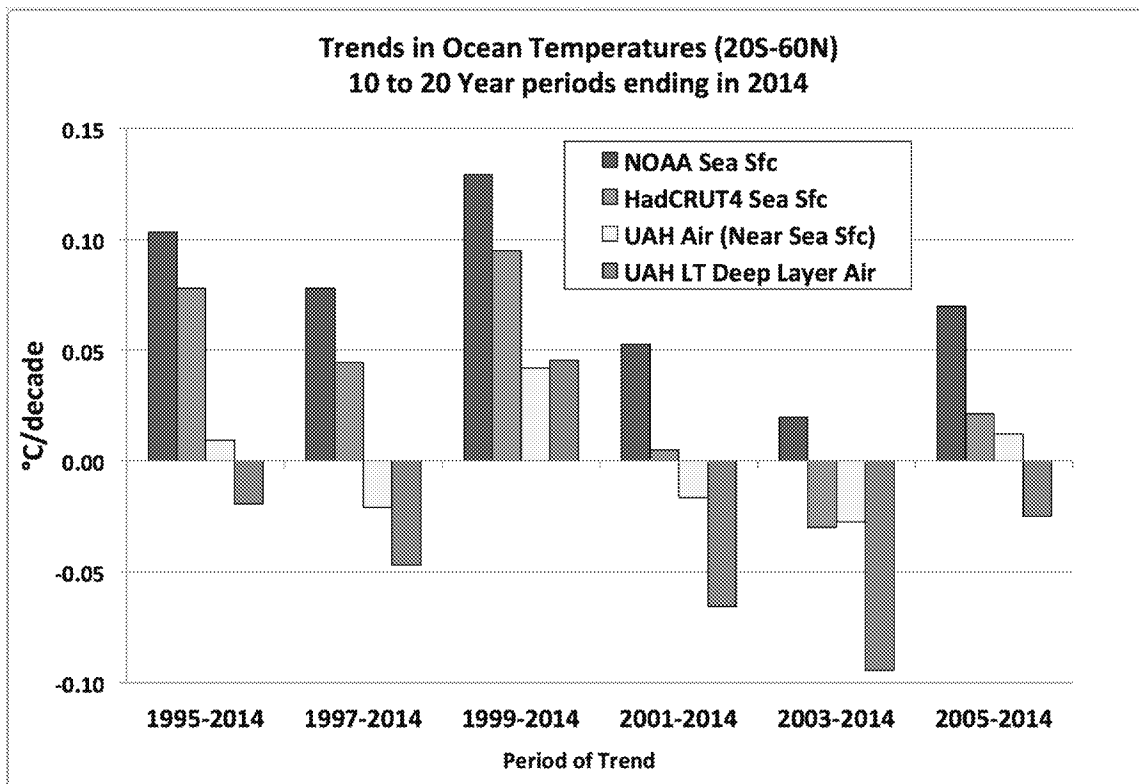


Figure 4. Decadal trends (°C/decade) of four temperature datasets over the oceans from 20°S to 60°N for varying periods ending in 2014. Red and orange are surface seawater temperature datasets from NOAA and the Hadley Centre (HadCRUT4). Yellow is a near-surface air temperature dataset (Night Marine Air Temperature) built by UAH (preliminary). Blue is the temperature trend of the deep atmosphere (surface to 35,000 ft or Lower Troposphere) from microwave emissions captured by satellites (also UAHv6.0b5.)

A number of observations are evident in Fig. 4. (1) In terms of the temperature trend, the air temperatures are less than those of the water (as indicated in my 2001 study mentioned above.) (2) NOAA warms the fastest in all periods. (3) In the past 10-14

years, the trends of the HadCRUT4 agree better with the near-surface air temperature dataset (being near zero and supporting the notion of a hiatus) than with the trends from its physically-identical quantity from NOAA. (4) The magnitude of the NMAT trends lies between the trends of the deep atmospheric and sea water.

This figure generates a number of data quality questions too. (1) If NMATs were used to calibrate the ship temperatures and then the ships were used to calibrate the buoy temperatures, why does the NOAA dataset differ so much from its basic reference point – NMATs? (2) What do the time series look like and what are the sub-period trends for seawater under the condition that only ships and/or only buoys are used to build the dataset for the past 20-25 years? (3) What does the time series of NOAA's NMAT (i.e. their reference) dataset show?

The real science questions here are those which have significant importance to the understanding of how extra greenhouse gases might affect the climate as shown in the following section.

(2) How well do we understand climate change?

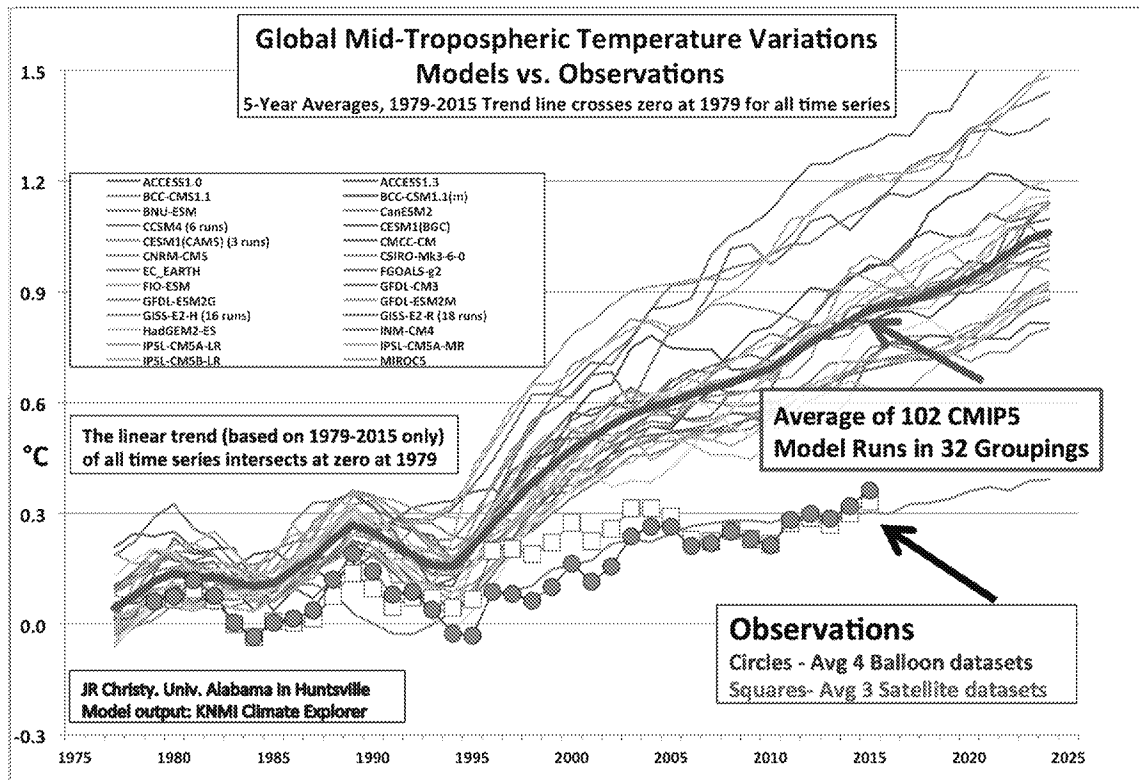
A critical scientific goal in our era is to determine whether emissions from human activities impact the climate and if so by how much. This is made especially difficult because we know the climate system already is subject to significant changes without the influence of humans. Because there is no measuring device that explicitly determines the *cause* of the climate changes we can measure, such as temperature, our science must take a different approach to seek understanding as to what causes the changes, i.e. how much is natural and how much is human induced. The basic approach today utilizes climate models. (The projections of these models are being utilized for carbon policies as well.)

It is important to understand that output from these models, (i.e. projections of the future climate and the specific link that increasing CO₂ might have on the climate) are properly defined as scientific hypotheses or claims – model output cannot be considered as providing proof of the links between climate variations and greenhouse gases. These models are complex computer programs which attempt to describe through mathematical equations as many factors that affect the climate as is possible and thus estimate how the climate might change in the future. The model, it is hoped, will provide accurate responses of the climate variables, like temperature, when extra greenhouse gases are included in the model. However, the equations for nearly all of the important climate processes are not exact, representing the best approximations modelers can devise and that computers can handle at this point.

A fundamental aspect of the scientific method is that if we say we understand a system (such as the climate system) then we should be able to predict its behavior. If we are unable to make accurate predictions, then at least some of the factors in the system are not well defined or perhaps even missing. [Note, however, that merely replicating the behavior of the system (i.e. reproducing “what” the climate does) does not guarantee that the fundamental physics are well-known. In other words, it is possible to obtain the right answer for the wrong reasons, i.e. getting the “what” of climate right but missing the “why”.]

Do we understand how greenhouse gases affect the climate, i.e. the link between emissions and climate effects? As noted above, a very basic metric for climate studies is the temperature of the bulk atmospheric layer known as the troposphere, roughly from the surface to 50,000 ft altitude. This is the layer that, according to models, should warm significantly as CO₂ increases – even faster than the surface. Unlike the surface temperature, this bulk temperature informs us about the crux of the global warming question – how much heat is accumulating in the global atmosphere? And, this CO₂-caused warming should be easily detectable by now, according to models. This provides a good test of how well we understand the climate system because since 1979 we have had two independent means of monitoring this layer – satellites from above and balloons with thermometers released from the surface.

I was able to access 102 CMIP-5 rcp4.5 (representative concentration pathways) climate model simulations of the atmospheric temperatures for the tropospheric layer and generate bulk temperatures from the models for an apples-to-apples comparison with the observations from satellites and balloons. These models were developed in institutions throughout the world and used in the IPCC AR5 Scientific Assessment (2013).



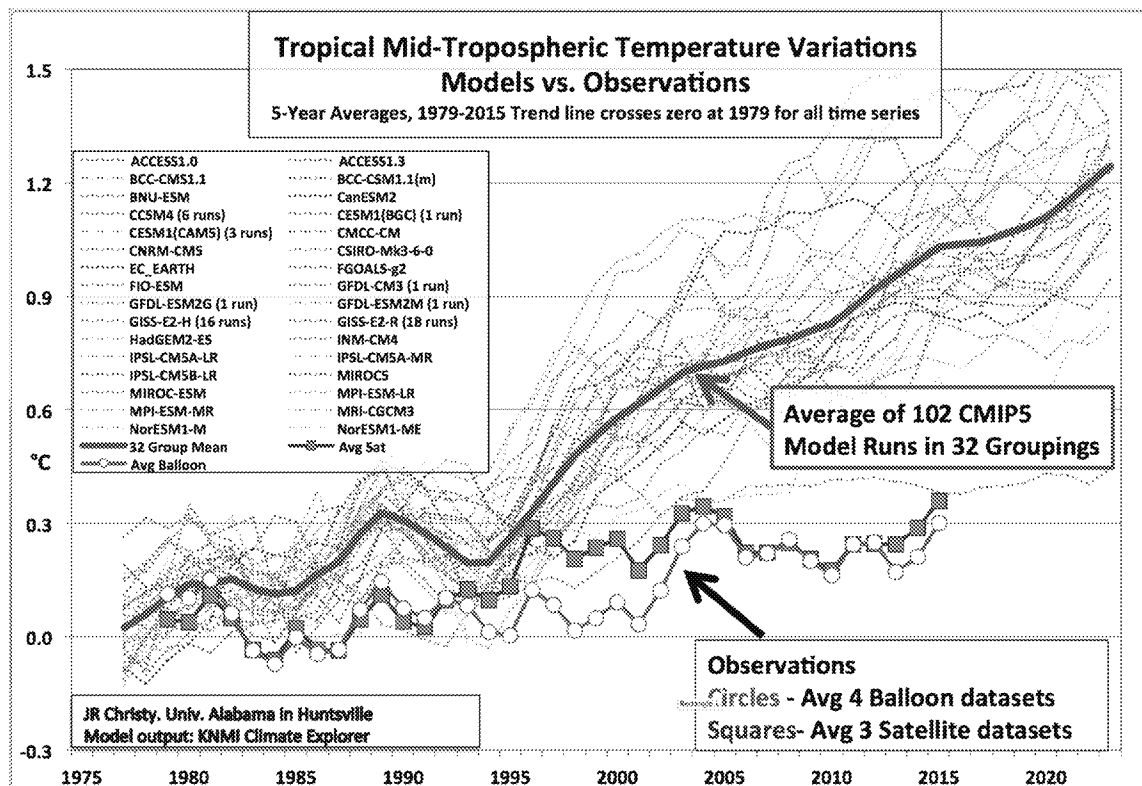
Above: Global average mid-tropospheric temperature variations (5-year averages) for 32 models (lines) representing 102 individual simulations. Circles (balloons) and squares (satellites) depict the observations. The Russian model (INM-CM4) was the only model close to the observations.

The information in this figure provides clear evidence that the models have a strong tendency to over-warm the atmosphere relative to actual observations. On average the models warm the global atmosphere at a rate 2.5 times that of the real world. This is not a short-term, specially-selected episode, but represents the past 37 years, over a third of a century. This is also the period with the highest concentration of greenhouse gases and thus the period in which the response should be of largest magnitude.

Following the scientific method of testing claims against data, we would conclude that the models do not accurately represent at least some of the important processes that impact the climate because they were unable to “predict” what has already occurred. In other words, these models failed at the simple test of telling us “what” has already happened, and thus would not be in a position to give us a confident answer to “what” may happen in the future and “why.” As such, they would be of highly questionable

value in determining policy that should depend on a very confident understanding of how the climate system works.

There is a related climate metric that also utilizes atmospheric temperature which in models has an even larger response than that of the global average shown above. This metric, then, provides a stronger test for understanding how well models perform regarding greenhouse gases specifically. In the models, the tropical atmosphere warms significantly in response to the added greenhouse gases – more so than that of the global average atmospheric temperature.



Above: Tropical average mid-tropospheric temperature variations (5-year averages) for 32 models (lines) representing 102 individual simulations. Circles (balloons) and squares (satellites) depict the observations.

In the tropical comparison here, the disparity between models and observations is even greater, with models on average warming this atmospheric region by a factor of three times greater than in reality. Such a result re-enforces the implication above that the models have much improvement to undergo before we may have confidence they will provide information about what the climate may do in the future or even why the climate

varies as it does. For the issue at hand, estimates of how the global temperature might be affected by emission reductions from regulations would be exaggerated and not reliable.

(3) Climate Impact of Regulations (i.e. Paris) Will Not Be Attributable or Detectable

No one knows the climate impact of the proposed carbon emission reductions agreed to in Paris. The main reason for this is that there is considerable latitude for countries to do as little or as much as they desire. Examining the history of global carbon emissions, it is clear that countries, especially developing countries, will continue to seek to expand energy use through carbon combustion because of their affordability in providing considerable positive benefits to their citizens.

In any case, impact on global temperature for current and proposed reductions in greenhouse gases will be tiny at best. To demonstrate this, let us assume, for example, that the total emissions from the United States were reduced to zero, as of last May 13th, 2015 (the date of a hearing at which I testified). In other words as of that day and going forward, there would be no industry, no cars, no utilities, no people – i.e. the United States would cease to exist as of that day. Regulations, of course, will only reduce emissions a small amount, but to make the point of how minuscule the regulatory impact will be, we shall simply go way beyond reality and cause the United States to vanish. With this we shall attempt to answer the question of climate change impact due to emissions reductions.

Using the U.N. IPCC impact tool known as Model for the Assessment of Greenhouse-gas Induced Climate Change or MAGICC, graduate student Rob Junod and I reduced the projected growth in total global emissions by U.S. emission contribution starting on this date and continuing on. We also used the value of the equilibrium climate sensitivity as determined from empirical techniques of 1.8 °C. After 50 years, the impact as determined by these model calculations would be only 0.05 to 0.08 °C – an amount less than that which the global temperature fluctuates from month to month. [These calculations used emission scenarios A1B-AIM and A1F-MI with U.S. emissions comprising 14 percent to 17 percent of the 2015 global emissions. There is evidence that the climate sensitivity is less than 1.8 °C, which would further lower these projections.]

As noted, the impact on global emission and global climate of the recent agreements in Paris regarding global emissions is not exactly quantifiable. Knowing how each country will behave regarding their emissions is essentially impossible to predict besides the added issue of not knowing how energy systems themselves will evolve over time.

Because halting the emissions of our entire country would have such a tiny calculated impact on global climate, it is obvious that fractional reductions in emissions through regulation would produce imperceptible results. In other words, there would be no evidence in the future to demonstrate that a particular climate impact was induced by the proposed and enacted regulations. Thus, the regulations will have no meaningful or useful consequence on the physical climate system – even if one believes climate models are useful tools for prediction.

Summary

Climate change is a wide-ranging topic with many difficulties. Our basic knowledge about what the climate is doing (i.e. measurements) is plagued by uncertainties. In my testimony today I have given evidence that the bulk atmospheric temperature is measured well-enough to demonstrate that our understanding of how greenhouse gases affect the climate is significantly inadequate to explain the climate since 1979. In particular, the actual change of the fundamental metric of the greenhouse warming signature – the bulk atmospheric temperature where models indicate the most direct evidence for greenhouse warming should lie - is significantly misrepresented by the models. Though no dataset is perfect, the way in which surface datasets have been constructed leaves many unanswered questions, especially for the recent NOAA update which shows more warming than the others. Finally, regulations already enforced or being proposed, such as those from the Paris Agreement, will have virtually no impact on whatever the climate is going to do.

Appendix A

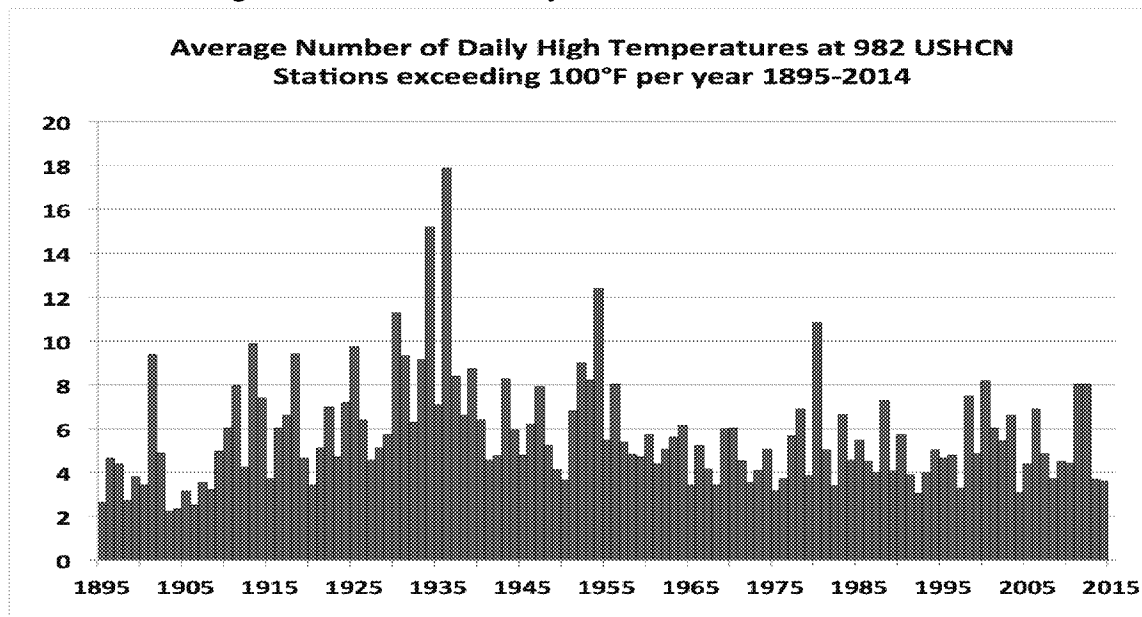
This appendix is an extract from my written testimony presented at the following Hearing:

U.S. Senate Committee on
Commerce, Science, & Transportation
Subcommittee on Space, Science and Competitiveness
8 Dec 2015
Testimony of John R. Christy
University of Alabama in Huntsville.

Alleged impacts of human-induced climate changes regarding extreme events

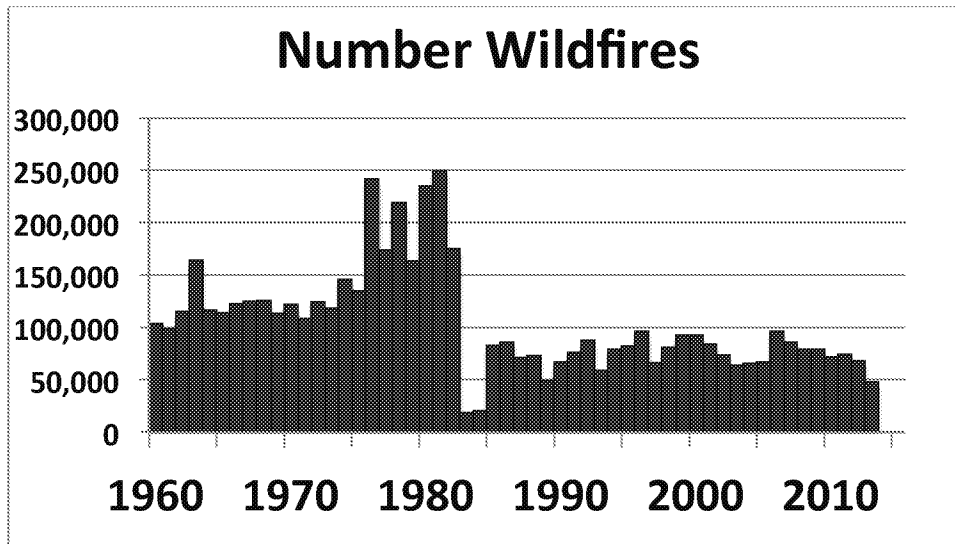
Much of the alarm related to increasing greenhouse gas concentrations shifted in the past decade from global temperature changes to changes in extreme events, i.e. those events which typically have a negative impact on the economy. These events may be heat waves, floods, hurricanes, etc.

In terms of heat waves, below is the number of 100 °F days observed in the U.S. from a controlled set of weather stations. It is not only clear that hot days have not increased, but it is interesting that in the most recent years there has been a relative dearth of them.

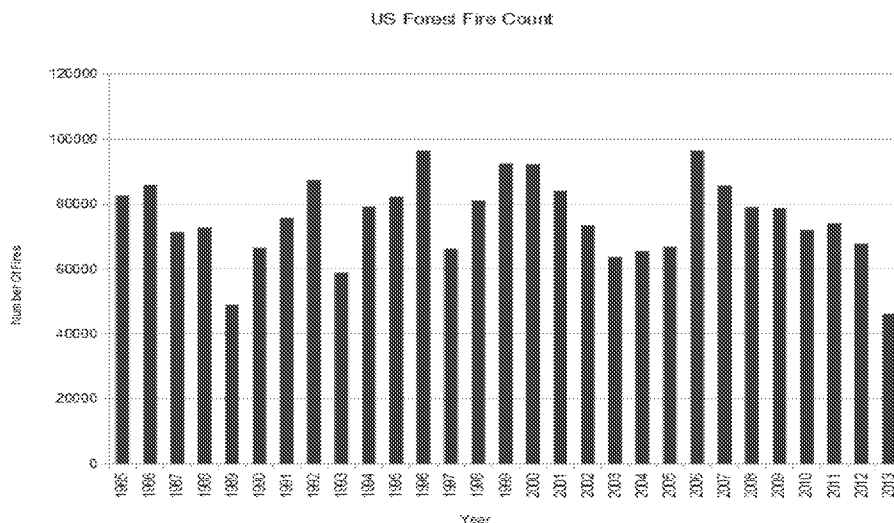


Above: Average number of days per-station in each year reaching or exceeding 100°F in 982 stations of the USHCN database (NOAA/NCEI, prepared by JRChristy).

Forest and wild fires are documented for the US. The evidence below indicates there has not been any change in frequency of wildfires. Acreage (not shown) shows little change as well.



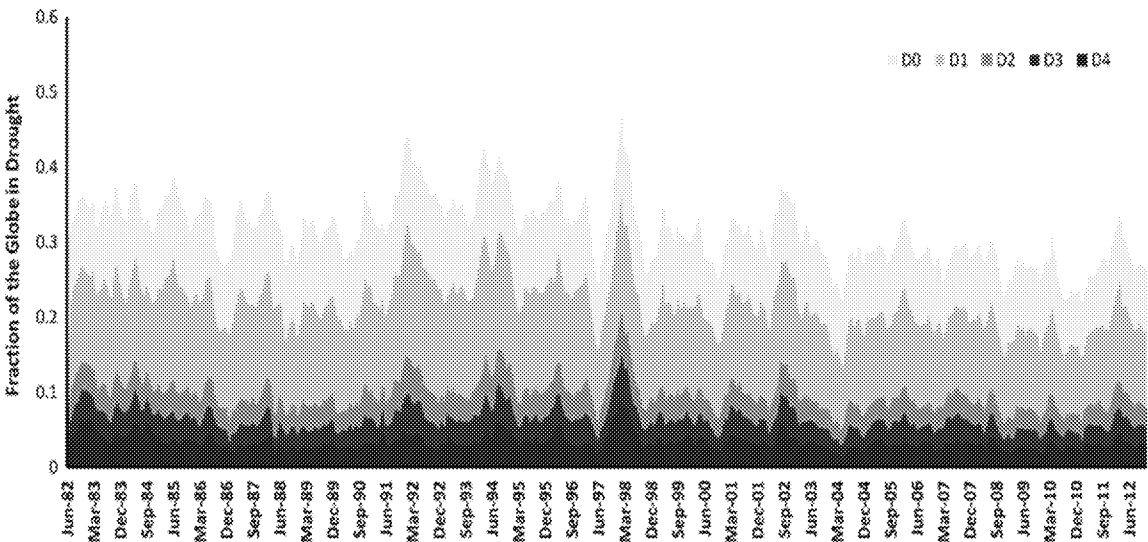
Above: Number of U.S. wildfires. As the management of these events changes, and thus the number also changes, but the number of events since 1985 has remained constant. (National Interagency Fire Center <https://www.nifc.gov/fireInfo/nfn.htm>)



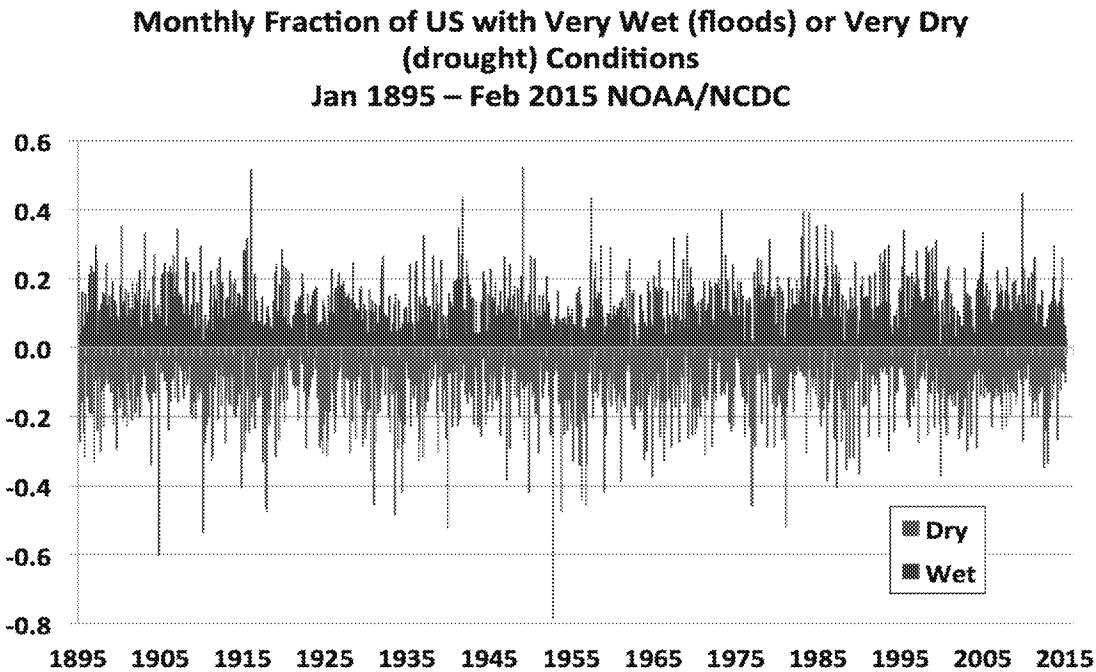
Above: Number of U.S. forest fires per year since 1965.

The two figures above demonstrate that fire events have not increased in frequency in the United States during the past several decades.

The claims that droughts and floods are increasing may be examined by the observational record as well.

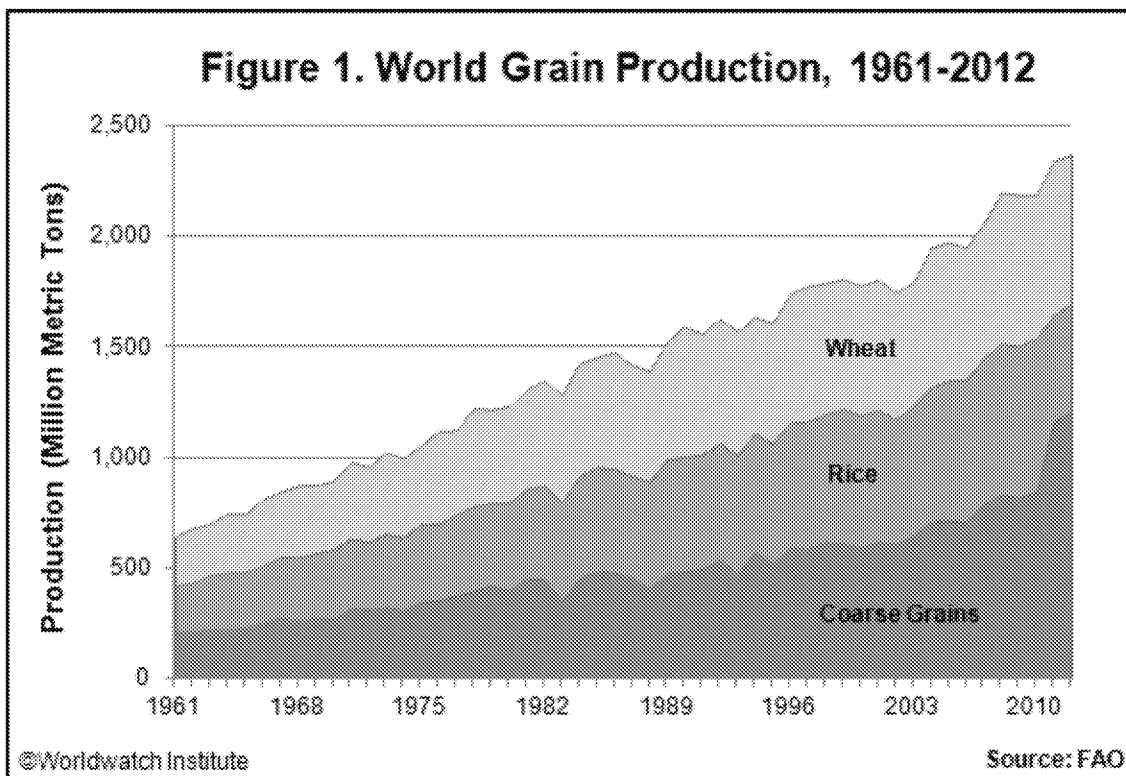


Above: Global areal extent of five levels of drought for 1982-2012 where dryness is indicated in percentile rankings with D0 < 30, D1 < 20, D2 < 10, D3 < 5 and D4 < 2 percentile of average moisture availability. (Hao et al. 2014)



Above: Areal fraction of conterminous U.S. under very wet (blue) or very dry (red) conditions. NOAA/NCEI.

The two figures above demonstrate that moisture conditions have not shown a tendency to have decreased (more drought) or increased (more large-scale wetness). Such information is rarely consulted when it is more convenient simply to make unsubstantiated claims that moisture extremes, i.e. droughts and floods (which have always occurred), are somehow becoming even more extreme. Over shorter periods and in certain locations, there is evidence that the heaviest precipitation events are tending to be greater. This is not a universal phenomenon and it has not been established that such changes may be due to changes in greenhouse gas concentrations as demonstrated earlier because the model projections are unable to reproduce the simplest of metrics.



Above: World grain production 1961-2012. U.N. Food and Agriculture Organization.

It is a simple matter to find documentation of the ever-rising production of grains. One wonders about the Federal Council on Environmental Quality's allegation that there has been "harm to agriculture" from human-induced climate change because when viewing the total growth in production, which appears to be accelerating, one would assume no "harm" has been done during a period of rising greenhouse gases.

With the evidence in these examples above, it is obviously difficult to establish the claims about worsening conditions due to human-caused climate change, or more generally that any change could be directly linked to increasing CO₂. This point also relates to the issue of climate model capability noted earlier. It is clear that climate models fall short on some very basic issues of climate variability, being unable to reproduce “what” has happened regarding global temperature, and therefore not knowing “why” any of it happened. It is therefore premature to claim that one knows the causes for changes in various exotic measures of weather, such as rainfall intensity over short periods, which are not even explicitly generated in climate model output.

The Disappointing Scientific Process

I have written much for previous congressional hearings and other venues about the failure of the scientific community to objectively approach the study of climate and climate change. (See Appendix) Climate science is a murky science with large uncertainties on many critical components such as cloud distributions and surface heat exchanges. As mentioned above, there is no objective instrumentation that can tell us “why” changes occur. That being the case, we are left with hypotheses (claims) to put forward and then to test. The information given above, in my view, is clear evidence that the current theoretical understanding of “why” the climate changes, as embodied in models (and on which current policy is based), fails such tests. Indeed, the theoretical (model) view as expressed in the IPCC AR5 in every case overestimated the bulk tropical atmospheric temperature response of extra greenhouse gases (see above and IPCC Supplementary Material Figure 10.SM.1) indicating the theoretical understanding of the climate response is too sensitive to greenhouse gases.

One problem with our science relates to the funding process for climate studies, the vast majority of which is provided through federal agencies. Funding decisions are decided by people, and people have biases. Our science has also seen the move toward “consensus” science where “agreement” between people and groups is elevated above determined, objective investigation. The sad progression of events here has even led to congressional investigations designed to silence (with some success) those whose voices, including my own, have challenged the politically-correct views on climate (i.e. congressional investigation by Rep. Grijalva, 22 Feb 2015, <http://www.scribd.com/doc/256811029/Letter-to-UAH-re-John-Christy>.)

Today, funding decisions are made by review panels. In this process, many proposals for funding are submitted to the agencies, but the agencies only have a fraction of the funds available to support the proposals, so only a few proposals can be funded and these are selected by panels. In the area of climate, it is clear the agencies are convinced of the

consensus view of dangerous climate change as indicated by their various statements and press releases on the issue. Therefore, when a contrarian proposal is submitted that seeks to discover other possible explanations besides greenhouse gases for the small changes we now see, or one that seeks to rigorously and objectively investigate climate model output, there is virtually no chance for funding. This occurs because the panel determines by majority vote whom to fund, and with tight competition, any bias by just a couple of panel members against a contrarian proposal is sufficient for rejection. Of course, the agencies will claim all is done in complete objectivity, but that would be precisely the expected response of someone already within the “consensus” and whose agency has stated its position on climate change. This brings me to “consensus science.”

The term “consensus science” will often be appealed to regarding arguments about climate change to bolster an assertion. This is a form of “argument from authority.” Consensus, however, is a political notion, not a scientific notion. As I testified to the Inter-Academy Council in June 2010, wrote in *Nature* that same year (Christy 2010), and documented in my written testimony for several congressional hearings (e.g., House Space, Science and Technology, 31 Mar 2011) the IPCC and other similar Assessments do not represent for me a consensus of much more than the consensus of those selected to agree with a particular consensus.

The content of these climate reports is actually under the control of a relatively small number of individuals - I often refer to them as the “climate establishment” – who through the years, in my opinion, came to act as *gatekeepers* of scientific opinion and information, rather than *brokers*. The voices of those of us who object to various statements and emphases in these assessments are by-in-large dismissed rather than accommodated. This establishment includes the same individuals who become the “experts” called on to promote IPCC claims in government reports such as the endangerment finding by the Environmental Protection Agency.

As outlined in my previous testimonies, these “experts” become the authors and evaluators of their own research relative to research which challenges their work. This becomes an obvious conflict of interest. But with the luxury of having the “last word” as “expert” authors of the reports, alternative views vanish. This is not a process that provides the best information to the peoples’ representatives. The U.S. Congress must have the full range of views on issues such as climate change which are (a) characterized by considerable ambiguity (see model results) (b) used to promote regulatory actions which will be economically detrimental to the American people and, most ironically, (c) will have no impact on whatever the climate will do.

I've often stated that climate science is a "murky" science. We do not have laboratory methods of testing our hypotheses as many other sciences do. As a result what passes for science includes, opinion, arguments-from-authority, dramatic press releases, and fuzzy notions of consensus generated by preselected groups. This is not science.

We know from Climategate emails and many other sources that the IPCC has had problems with those who take different positions on climate change than what the IPCC promotes. There is another way to deal with this however. Since the IPCC activity and climate research in general *is* funded by U.S. taxpayers, then I propose that five to ten percent of the funds be allocated to a group of well-credentialed scientists to produce an assessment that expresses legitimate, alternative hypotheses that have been (in their view) marginalized, misrepresented or ignored in previous IPCC reports (and thus the EPA Endangerment Finding and National Climate Assessments).

Such activities are often called "Red Team" reports and are widely used in government and industry. Decisions regarding funding for "Red Teams" should not be placed in the hands of the current "establishment" but in panels populated by credentialed scientists who have experience in examining these issues. Some efforts along this line have arisen from the private sector (i.e. *The Non-governmental International Panel on Climate Change* at <http://nipccreport.org/> and Michaels (2012) *ADDENDUM: Global Climate Change Impacts in the United States*). I believe policymakers, with the public's purse, should actively support the assembling all of the information that is vital to addressing this murky and wicked science, since the public will ultimately pay the cost of any legislation alleged to deal with climate.

Topics to be addressed in this "Red Team" assessment, for example, would include (a) evidence for a low climate sensitivity to increasing greenhouse gases, (b) the role and importance of natural, unforced variability, (c) a rigorous and independent evaluation of climate model output, (d) a thorough discussion of uncertainty, (e) a focus on metrics that most directly relate to the rate of accumulation of heat in the climate system, (f) analysis of the many consequences, including benefits, that result from CO₂ increases, and (g) the importance that affordable and accessible energy has to human health and welfare.

What this proposal seeks is to provide to the Congress and other policymakers a parallel, scientifically-based assessment regarding the state of climate science which addresses issues which here-to-for have been un- or under-represented by previous tax-payer funded, government-directed climate reports. In other words, our policymakers need to see the entire range of findings regarding climate change.

Summary of Extract

The messages of the two points outlined in the extract above are: (1) the claims about increases in frequency and intensity of extreme events are generally not supported by actual observations and, (2) official information about climate science is largely controlled by agencies through (a) funding choices for research and (b) by the carefully-selected (i.e. biased) authorship of reports such as the EPA Endangerment Finding and the National Climate Assessment.

Message

From: Cory, Preston [Cory.Preston@epa.gov]
Sent: 12/3/2020 4:41:47 PM
To: Idsal, Anne [idsal.anne@epa.gov]; Moor, Karl [Moor.Karl@epa.gov]; Dominguez, Alexander [dominguez.alexander@epa.gov]; Harlow, David [harlow.david@epa.gov]; Landeene, Sarah [Landeene.Sarah@epa.gov]; Tardif, Abigale (Abbie) [Tardif.Abigale@epa.gov]; Raymond, Kelley [Raymond.Kelley@epa.gov]
CC: DeLuca, Isabel [DeLuca.Isabel@epa.gov]
Subject: Final PM NAAQS FRM Comms Materials
Attachments: 12-03-2020 PM NAAQS Comms Plan FINAL.docx; 12-03-2020 PM NAAQS FRM Press Release FINAL.docx; 12-03-2020 PM NAAQS QsAs FINAL.docx

All,

Attached are the final PM NAAQS materials (including OPA's updated PR) for your records and awareness.

Thanks,
Preston

K. Preston Cory
Office of Air and Radiation
U.S. Environmental Protection Agency
Office: 202-564-0137
Cell: 202-924-2465
cory.preston@epa.gov

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Cory, Preston [Cory.Preston@epa.gov]
Sent: 12/3/2020 2:44:27 PM
To: Idsal, Anne [idsal.anne@epa.gov]; Raymond, Kelley [Raymond.Kelley@epa.gov]; Moor, Karl [Moor.Karl@epa.gov]
CC: Harlow, David [harlow.david@epa.gov]; Dominguez, Alexander [dominguez.alexander@epa.gov]; Tardif, Abigale (Abbie) [Tardif.Abigale@epa.gov]; Landeene, Sarah [Landeene.Sarah@epa.gov]
Subject: FW: FOR APPROVAL: PM NAAQS Press Release

FYI below.

From: Block, Molly <block.molly@epa.gov>
Sent: Thursday, December 3, 2020 9:22 AM
To: Molina, Michael <molina.michael@epa.gov>; Gunasekara, Mandy <gunasekara.Mandy@epa.gov>
Cc: Hewitt, James <hewitt.james@epa.gov>; Rodriguez, Alejandra (Allie) <rodriguez.alejandra@epa.gov>; Johnson, Taylor <Johnson.Taylor.C@epa.gov>; Murray, William <Murray.William@epa.gov>; Cory, Preston <Cory.Preston@epa.gov>
Subject: FOR APPROVAL: PM NAAQS Press Release

Mandy and Molina –

Please see press release below for Monday's PM NAAQS announcement. Let us know if you have any edits.

Thanks!
Molly

In West Virginia, EPA Finalizes NAAQS for Particulate Matter

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Message

From: Landeene, Sarah [Landeene.Sarah@epa.gov]
Sent: 11/23/2020 7:07:14 PM
To: Idsal, Anne [idsal.anne@epa.gov]
CC: Servidio, Cosmo [Servidio.Cosmo@epa.gov]
Subject: RE: Agenda & Meeting Materials
Attachments: 11.23.20 AW Brief Template.docx; Longview ACE Permit.docx; 2020-11-17_CTI_PDAA_Austin_Initial_AQ_Benefits.pptx; RFS Pending Items November 2020.docx; RFS Compliance Deadlines for OAR Revised.docx

Hi Anne and Cosmo,

Attached is the briefing paper with the agenda for today's check-in, along with the attachments.

If I can send any additional details, please let me know.

Best,
Sarah

From: Idsal, Anne <idsal.anne@epa.gov>
Sent: Monday, November 23, 2020 1:34 PM
To: Landeene, Sarah <Landeene.Sarah@epa.gov>
Cc: Servidio, Cosmo <Servidio.Cosmo@epa.gov>
Subject: Agenda & Meeting Materials

Good afternoon Sarah,

Could you please send me and Cosmo the briefing materials for today's check-in with AW when you have a chance?

Thanks,
Anne

Anne L. (Idsal) Austin
Principal Deputy Assistant Administrator
U.S. EPA – Office of Air and Radiation
(202)564-6685 (direct)
(202)870-7547 (cell)

Message

From: Graham, Cheryl [Graham.Cheryl@epa.gov]
Sent: 11/4/2020 6:20:00 PM
To: Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Davis, Alison [Davis.Alison@epa.gov]; Montoro, Marta [Montoro.Marta@epa.gov]; Schillo, Bruce [Schillo.Bruce@epa.gov]; Holmes, Carol [Holmes.Carol@epa.gov]; Mazakas, Pam [Mazakas.Pam@epa.gov]; Millett, John [Millett.John@epa.gov]; South, Peter [South.Peter@epa.gov]; Lipshultz, Jon (ENRD) [Jon.Lipshultz@usdoj.gov]; Wood, Anna [Wood.Anna@epa.gov]; Edwards, Crystal [Edwards.Crystal@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; South, Mia [South.Mia@epa.gov]; Cortelyou-Lee, Jan [Cortelyou-Lee.Jan@epa.gov]; Iglesias, Amber [Iglesias.Amber@epa.gov]; Schachter, Scott (ENRD) [Scott.Schachter@usdoj.gov]; Doyle, Andrew (ENRD) [Andrew.Doyle@usdoj.gov]; leslie.hill@usdoj.gov [Leslie.Hill@usdoj.gov]; Mitchell, Ken [Mitchell.Ken@epa.gov]; Wortman, Eric [Wortman.Eric@epa.gov]; Knapp, Kristien [Knapp.Kristien@epa.gov]; Purdy, Angeline (ENRD) [angeline.purdy@usdoj.gov]; Debra Carfora [debra.carfora@usdoj.gov]; Perez, Idalia [Perez.Idalia@epa.gov]; martha.mann@usdoj.gov [Martha.Mann@usdoj.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]; Lewis, Josh [Lewis.Josh@epa.gov]; Harlow, David [harlow.david@epa.gov]; DeLuca, Isabel [DeLuca.Isabel@epa.gov]; Dominguez, Alexander [dominguez.alexander@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; McLamb, Marguerite [McLamb.Marguerite@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Idsal, Anne [idsal.anne@epa.gov]; Jessica.ODonnell@usdoj.gov; Spenillo, Justin [Spenillo.Justin@epa.gov]; Moor, Karl [Moor.Karl@epa.gov]; Raymond, Kelley [Raymond.Kelley@epa.gov]; Freeman, Caroline [Freeman.Caroline@epa.gov]
Subject: ARLO Deadline Calendar for the week of November 2, 2020
Attachments: 20-11-02 ARLO Deadline Calendar.docx

Attached is the current deadline calendar and other information that is sent out weekly from ARLO. If information in the attachment raises questions, please contact Gautam Srinivasan. Thanks

Cheryl R. Graham
OGC/ARLO
(202) 564-5473

ARLO Deadline Calendar

Week of November 2, 2020

NEW CASES, NOTICES OF CITIZEN SUIT, PETITIONS, and NEW DECISIONS

NEW CASES

- *Center for Biological Diversity, et al. v. EPA*, No. 3:20-cv-05436 (N.D. CA) (Amended Complaint for failure to Issue findings of failure to submit nonattainment SIPs - Missouri, Guam, Indiana, Louisiana, and Puerto Rico with regard to sulfur dioxide (SO₂) pollution) (Daniel Conrad)
- *Environmental Integrity Project, et al v. EPA*, No. 1:20-CV-03119 (D.D.C) (for failure to review the general control device requirements for flares under the New Source Performance Standards and NESHAP programs at least every eight years) (Amy Branning)
- [HYPERLINK
"https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.westlaw.com%2FDocument%2FI55A3B8401B1811EB910FF8A10366C41B%2FView%2FFullText.html%3FnavigationPath%3DAlert%252Fv1%252FlistNavigation%252FDocketAlertNext%252Fi0ad84c19000001757e348a5f22ae5439%253FtransitionType%253DDocketAlert%2526originationContext%253DSearch%252520Result%2526contextData%253D%252528sc.DocketAlert%252529%2526rank%253D2%2526alertGuid%253Di0ad715a6000001689b6078fadcc35c77%26listSource%3DAlert%26list%3DDocketAlertNext%26rank%3D2%26originationContext%3DSearch%2520Result%26transitionType%3DDocketAlert%26contextData%3D%2528sc.DocketAlert%2529%26VR%3D3.0%26RS%3Dcblt1.0%26alertGuid%3Di0ad715a6000001689b6078fadcc35c77&data=04%7C01%7CGraham.Cheryl%40epa.gov%7C126a65ddf62f4c4d96a808d880198bee%7C88b378b367484867ac976aacbeca6a7%7C0%7C0%7C637400194489940387%7CUnknown%7CTWFpbGZsb3d8eyJWlJoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCi6Mn0%3D%7C1000&sdata=mjL8IESD3OcKcQo1JHRUAdNNTDcIdaqboEi fHwHytLg%3D&reserved=0"]20-1434 (DC Cir.) (petition for review of EPA's final action titled "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Final Actions on Petitions for Reconsideration" at 85 Fed. Reg. 55,286 (Sept. 4, 2020))

NOTICES OF CITIZEN SUIT

PETITIONS

NEW DECISIONS and SETTLEMENTS

UPCOMING LITIGATION DEADLINES

In the coming two weeks

- 11/02 Response to Motion on Venue and Consolidation
National Parks Conservation Association v. EPA, No. 17-60828 (5th Cir.) (challenge to October 2017 Texas BART Alternative FIP) (Daniel Schramm)
- 11/03 Status Report

- National Parks Conservation Association, et al. v. EPA***, No. 19-3526 (8th Cir.) (petition for review of EPA's final action entitled "Approval and Promulgation of Implementation Plans, Arkansas, Approval of Regional Haze State Implementation Plan Revision for Electric Generating Units in Arkansas" at 84 Fed. Reg. 51,033 (September 27, 2019)) (Nora Greenglass)
- 11/04 Status Report
Biogenic CO2 Coalition v. EPA, No. 15-1480 (DC Cir.) (EGU 111(b) BIOMASS LEAD CASE - Petition for review of EPA's final rule entitled "Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units" at 80 Fed. Reg. 64,510 (October 23, 2015) (Nora Greenglass)
- 11/09 Status Report
State of Utah, et al. v. EPA, No. 16-9541 (10th Cir.) (petition for review of EPA's final rule entitled "Approval, Disapproval and Promulgation of Air Quality Implementation Plans, Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan, Utah, Revisions to Regional Haze State Implementation Plan, Federal Implementation Plan for Regional Haze" at 81 Fed. Reg. 43,894-01 (July 5, 2016) (Nora Greenglass)
- 11/12 EPA Brief (DOJ may seek 30 day extension which is routinely granted)
Packaging Corporation of America v. EPA, No. 20-72199 (9th Cir.) (9th CIRCUIT CHALLENGE TO PULP AND PAPER SUBPART S APPLICABILITY DETERMINATION - Petition for review of EPA's final action taken in a letter regarding 40 C.F.R. Part 63, Subpart S Applicability Determination Request, Packaging Corporation of America, Wallula Mill (May 26, 2020) (Scott Jordan)
- 11/16 Status Report
State of Texas, et al. v. EPA, No. 16-1078 (DC Cir.) (Petition for review of EPA's final action titled "Approval and Promulgation of Implementation Plans, Texas and Oklahoma, Regional Haze State Implementation Plans, Interstate Visibility Transport State Implementation Plan to Address Pollution Affecting Visibility and Regional Haze, Federal Implementation Plan for Regional Haze, Final Rule," 81 Fed. Reg. 296 (Jan. 5, 2016) (Daniel Schramm, Nora Greenglass)
- 11/16 Status Report
National Alliance of Forest Owners, et al. v. EPA, No. 10-1209 (D.C. Cir.) (NAFO/AFPA PETITION RE BIOGENIC EMISSIONS UNDER TAILORING RULE - Challenge to EPA's treatment of Biogenic Emissions in Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010)) (Nora Greenglass)
- 11/16 Status Report
National Environmental Development Association's Clean Air Project v. EPA, No. 20-1309 (D.C. Cir.) (Petition for review on four severed challenges to revisions to the refrigerant management regulations under CAA section 608) (Melina Williams)

Deadlines beyond two weeks

- 11/17 Motion to Govern Further Proceedings
American Petroleum Institute, et al. v. EPA, No. 13-1108 (DC Cir.) (Petition for review of 2012 oil and gas NSPS revision (bifurcated from challenge to 2012 NESHAP and consolidated with

[PAGE]

- challenges to 2014 NSPS amendment and 2016 NSPS setting methane standards)) (Amy Branning)
- 11/23 Status Report
American Petroleum Institute, et al. v. EPA, No. 12-1405 (D.C. Cir.) (Petitions for review of EPA's 2012 oil and gas NESHAP revision based on residual risk and technology review (Amy Branning))
- 11/24 Deferred Appendix
Environmental Defense Fund v. EPA, No. 19-1222 (D.C. Cir.) (petition for review of EPA's final action "Adopting Subpart Ba Requirements in Emission Guidelines for Municipal Solid Waste Landfills," published at 84 Fed. Reg. 44,547 (Aug. 26, 2019) (Karen Palmer))
- 11/27 Answer Deadline
Center for Biological Diversity, et al. v. EPA, No. 3:20-cv-06020 (N.D. CA) (Complaint alleges EPA has missed its deadlines for the following actions: (1) promulgating a Federal Implementation Plan ("FIP") addressing a permitting rule for the Mendocino County Air Quality Management District, (2) finalizing action on 51 state implementation plan elements submitted by the state of California to implement the 2008 8-hour ozone NAAQS for the Eastern Kern (Kern County) nonattainment area, (3) finalizing action on the Rule No. 428 (New Source Review Requirements for New and Modified Major Sources in Federally Designated Nonattainment Areas) submitted by the state of California to meet the moderate nonattainment requirements under the 2008 8-hour ozone NAAQS for the Northern Sierra Air Quality Management District, and (4) finalizing action on 7 state implementation plan elements submitted by the state of Colorado to implement the 2008 8-hour ozone NAAQS for the Denver Metro/North Front Range nonattainment area. (Elizabeth Pettit))
- 11/30 Motion to Govern
American Iron and Steel Institute, et al. v. EPA, No. 20-1354 (D.C. Cir.) (petition for review of EPA's final action entitled "National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing Facilities Residual Risk and Technology Review, Final rule," at 85 Fed. Reg. 42,074 (Jul. 13, 2020)) (Meredith Miller)
- 12/01 Status Report
State of Texas, et al. v. EPA, No. 17-1021 (D.C. Cir.) (Petition for review of EPA's final action titled "Protection of Visibility: Amendments to Requirements for State Plans," 82 Fed. Reg. 3078 (Jan. 10, 2017)) (Nora Greenglass)
- 12/03 Motion to Govern
Air Alliance Houston, et al. v. EPA, No. 19-1260 (D.C. Cir.) (petition for review of EPA's final action titled "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Final Rule." at 84 Fed. Reg. 69,834 (Dec. 19, 2019)) (Jonathan Averback)
- 12/04 Deferred Appendix
Environmental Defense Fund v. EPA, No. 19-1222 (D.C. Cir.) (petition for review of EPA's final action "Adopting Subpart Ba Requirements in Emission Guidelines for Municipal Solid Waste Landfills," published at 84 Fed. Reg. 44,547 (Aug. 26, 2019) (Karen Palmer))
- 12/04 Motions to Govern

- Concerned Citizens for Nuclear Safety, et al. v. EPA**, No. 20-1344 (D.C. Cir.) (petition for review challenging the risk and technology review for Site Remediation) (Daniel Schramm)
- 12/07 Status Report
Afton Chemical Corporation v. EPA; No. 06-1095 (D.C. Cir.) (Petition for review of final regulation concerning emission durability procedures for vehicles; and trucks) (Seth Buchsbaum)
- 12/11 Final Briefs
Environmental Defense Fund v. EPA, No. 19-1222 (D.C. Cir.) (petition for review of EPA's final action "Adopting Subpart Ba Requirements in Emission Guidelines for Municipal Solid Waste Landfills," published at 84 Fed. Reg. 44,547 (Aug. 26, 2019) (Karen Palmer)
- 12/14 EPA Brief (DOJ expect to seek a 30 day extension which is routinely granted)
Packaging Corporation of America v. EPA, No. 20-72199 (9th Cir.) (9th CIRCUIT CHALLENGE TO PULP AND PAPER SUBPART S APPLICABILITY DETERMINATION - Petition for review of EPA's final action taken in a letter regarding 40 C.F.R. Part 63, Subpart S Applicability Determination Request, Packaging Corporation of America, Wallula Mill (May 26, 2020) (Scott Jordan)
- 12/15 EPA Brief
National Environmental Development Association's Clean Air Project v. EPA, No. 17-1016 (D.C. Cir.) (petition for review on main challenges to 2016 and 2020 revisions to the refrigerant management regulations under CAA section 608) (Melina Williams)
- 12/18 Status Report
American Chemistry Council et al v. EPA, No. 08-1014 (D.C. Cir.) (Petitions for review of 2007 revisions to NSPS for Leak Detection and Repair for refineries and chemical processing plants) (Amy Branning)
- 12/21 Status Report
Cement Kiln Recycling Coalition, et al. v. EPA, No. 04-1077 (D.C. Cir.) (Petition for review of final rule promulgating monitoring requirements for particulate matter continuous emissions monitoring systems at new stationary sources) (Amy Branning)
- 12/23 EPA Brief
Sierra Club, et al. v. EPA, No. 20-1121 (D.C. Cir.) (petition for review of two of EPA's final actions titled "Air Plan Approval, Texas, Houston-Galveston-Brazoria Area Redesignation and Maintenance Plan for Revoked Ozone National Ambient Air Quality Standards, Section 185 Fee Program" 85 Fed. Reg. 8411 (Feb. 14, 2020) and "Air Plan Approval, Texas, Dallas-Fort Worth Area Redesignation and Maintenance Plan for Revoked Ozone National Ambient Air Quality Standards" 85 Fed. Reg. 19,096 (Apr. 6, 2020)) (Karen Bianco, Kaytrue Ting)
- 12/29 Status Report
National Parks Conservation Association, et al. v. EPA, No. 17-60828 (5th Cir.) (Petition for review of EPA's final action titled, "Promulgation of Air Quality Implementation Plans, State of Texas, Regional Haze and Interstate Visibility Transport Federal Implementation Plan," 82 Fed. Reg. 48,324 (Oct. 17, 2017) (Daniel Schramm, Nora Greenglass)

UPCOMING COURT-ORDERED AND RELATED DEADLINES

- 12/10 Deadline to Issue Proposed SIP or FIP
Center for Biological Diversity, et al. v. EPA, No. 4:19-cv-01544-KAW (N.D. CA.) (alleging that EPA failed to perform its mandatory duties to reclassify to serious the West Central Pinal (AZ) 2006 24-hour PM2.5 Nonattainment Area, to promulgate a FIP and impose sanctions for Arizona's NSR program defects, and to make findings of failure to submit for the Provo and Salt Lake City, Utah serious 2006 24-hour averaging time PM2.5 Nonattainment Areas) (Stephanie Hogan)
- 12/31 Issue fourth/final round of area designations for 2010 SO2 primary NAAQS under CAA section 107(d)
Sierra Club, et al. v. EPA, No. 3:13cv3953,4:13cv3953 (N.D. Cal.) (failure to make SO2 NAAQS designations) (Mike Thrift)

CASES and MAJOR MOTIONS AWAITING DECISION

- ***United States Steel Corporation v. EPA***, No. 16-2668 (8th Cir.) (Petition for review of EPA's final action titled "Air Plan Approval, Minnesota and Michigan, Revision to 2013 Taconite Federal Implementation Plan Establishing BART for Taconite Plants," 81 Fed. Reg. 21,672 (Apr. 12, 2016)) (Matthew Marks) (argued Nov. 15, 2017)
- ***Renewable Fuels Association, et al. v. EPA***, No. 18-9533 (10th Cir.) (petition for review of EPA's final actions issued for Extensions of Small Refineries Temporary Exemptions Under the Renewable Fuels Standard Program for HollyFrontier Corp.'s Woods Cross; Utah Refinery (December 2017); HollyFrontier Corp.'s Cheyenne; Wyoming Refinery (May 2017) and Wynnewood Refining Company; LLC's Wynnewood, Oklahoma Refinery (2018)) (Susan Stahle) (argued September 26, 2019)
- ***State of Texas, et al. v. EPA***, No. 18-60606 (5th Cir.) (petition for review of EPA's final action entitled "Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards—San Antonio, Texas Area," 83 Fed. Reg. 35136 (July 25, 2018)) (Seth Buchsbaum) (argued October 9, 2019)
- ***Association of Irrigated Residents v. EPA***, No. 19-71223 (9th Cir.) (petition for review with regards to EPA's action on a 2008 ozone NAAQS SIP for the San Joaquin Valley nonattainment area in California) (Geoffrey Wilcox) (argued July 7, 2020)
- ***Truck Trailer Manufacturers Association v. EPA***, No. 16-1430 (DC Cir.) (Petition for review of EPA's final rule "Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2" 81 FR 73478 (Oct. 25, 2016)) (Sonja Rodman) (argued November 15, 2020)
- ***Sierra Club, et al. v. EPA***, No. 15-1465 (DC Cir.) (Petition for Review of Nonattainment New Source Review offset requirement interprecursor trading issues (severed from Ozone Implementation Rule Challenge to allow for reconsideration), consolidated with 19-1024 petition for review of EPA's final action titled "Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements, Final Rule" at 83 FR 62,998 (Dec. 6, 2018)) (Daniel Conrad, Derek Mills) (argued September 22, 2020)
- ***State of New Jersey v. EPA***, No. 08-1065 (D.C. Cir.) (challenge to EPA's revisions to the NSR "reasonable possibility" recordkeeping requirement) (Eaton Weiler) (argued November 2, 2020)